2008 Homeland Security S&T Stakeholders Conference West

"Putting First Responders First"
Los Angeles, CA

14-16 January 2008

Agenda

Plenary Session Day 1

Secure Against Fires & Embers (SAFE), Christopher Doyle Director Infrastructure Geophysical Division Science and Technology Directorate Department of Homeland Security

Plenary Session Day 2

The DHS Science & Technology Directorate, The Honorable Jay M. Cohen, Under Secretary, Science and Technology, DHS

- Aluminum Unreinforced Windows Media Audio Video File
- Hardened Aircraft Liner Windows Media Audio Video File
- HULD (Hardened Unit Load Device) Windows Media Audio Video File
- Standard Aircraft No Liner Windows Media Audio Video File

S&T Directorate Division Heads Panel
Mr. Jim Tuttle, Explosives Division
Dr. Beth George, Chemical & Biological Division (Acting)
Dr. David Boyd, Command, Control & Interoperability Division
CAPT David Newton, USCG, Borders & Maritime Security Division (Acting)
Dr. Sharla Rausch, Human Factors Division
Mr. Christopher Doyle, Infrastructure & Geophysical Division

T&E and Standards
Mr. George Ryan, Director, Test & Evaluation and Standards, S&T Directorate, DHS

S&T Portfolio Directors Panel
Mr. Robert Hooks, Director of Transition
Dr. Roger McGinnis, Director of Innovation / HSARPA
Dr. Starnes Walker, Director of Research

Basic Research to Enable a Safer Nation
Mr. Bryan Roberts, Program Manager and Economist, University Programs, S&T Directorate, DHS
Mr. James Johnson, Director, Office of National Laboratories, S&T Directorate, DHS

Los Angeles Regional Common Operational Picture Program (LARCOPP)

Plenary Session Day 3

International Perspectives on S&T Research for Homeland Security

Sweden:
Mr. Ivar Rönnbäck, Deputy Director-General, Swedish Rescue Services Agency
NATO Scenario Windows Media player Video clip
United Kingdom:
Mr. Richard Earland, Chief Information Officer, National Police Improvement Agency, United Kingdom

Interagency Partnerships in S&T Research for Homeland Security
Panelists:

- CAPT Paul Wiedenhoeft, USCG, Sector Commander/Captain of the Port, U.S. Coast Guard Sector Los Angeles - Long Beach
- Mr. Mark Denari, Director, Aviation Security & Public Safety, San Diego County Regional Airport Authority
- Mr. Daniel Hartwig, Manager of Security Programs, Bay Area Rapid Transit (BART), San Francisco

Pre Conference Training Workshop
Monday, 14 January 2008

Training Session 3:*Better Security via Randomization: A Game Theoretic Approach and its Operationalization at the Los Angeles International Airport*
Dr. Milind Tambe Professor of Computer Science, USC

Training Session 4: *Risk Communications and Public Warnings:Briefout from the July workshop*
Moderator:
Dennis Mileti

Training Session 5: *Scholars in Homeland Security*

Mr. Will McCormick

Training Session 7: *ALLHAZ Providing a Common Operating Picture for Emergency Management*
Elizabeth J. Matlack, Director National Center for Biodefense Communications

Training Session 8: *Small and Disadvantaged Business Opportunities*
Ms. Phyllis Miriashtiani, Small Business Advocate Office of Small and Disadvantaged Business Utilization Office of Procurement Operations, DHS

Training Session 9: *Things to Remember when Doing Business in (h)omeland (s)ecurity*
Mr. David Olive, Olive Edwards & Cooper, LLC
Mr. Rich Cooper, Olive, Edwards & Cooper, LLC
David McWhorter, Olive, Edwards & Cooper, LLC

Training Session 10: Interoperability Training: An Introduction to Specific Tools for Communications Interoperability Improvement
Luke Klein-Berndt, CTO, CCI, DHS S&T (confirmed)

Training Session 15: ***Current Science & Technology Business Opportunities***
Ms. Wanda Armwood,, Associate Director Office of Procurement Operations,
Office of Procurement Operations

Training Session 16: *What the Homeland Security Institute is and does*
Grants to Fund Your Homeland Security Projects, Michael Paddock, CEO, Grants Office LLC

Training Session 17: *Federated Simulation Based Training, Exercise, and Lessons Learned*
Jalal Mapar, Program Manager, IGD, DHS S&T

Training Session 18: *Crisis Communication 3 State Model Systems & Gaps*
Mr. Chris Logan, National, Governors Association, Program, Director for Homeland Security

Training Session 19: *Explosive Detection Technology: What Do First Responders Really Want?*
Part 1
Dr. Susan Hallowell, Director, TSL

- Plume.avi windows media player (video clip)
- 10% Back Windows media player (video clip)
- SimultaneousITMS Windows media player (mpeg movie file)
- ITI_A Windows media player (mpeg movie file)

Detection Technologies Primer, David Hernandez, Transportation Security Laboratory, S&T Directorate, US Department of Homeland Security

Training Session 21: *Workforce Development at the Frontier of DHS: Relevant Science, Technology, Engineering and Mathematics*
Moderator: Tom Kowalczyk, Office of University programs, DHS S&T

- **Panelists:**
- Dr. Mike Zyda, Director of GamePipe Lab USC (ppt)
- Dr. Isaac Maya, Research Director CREATE, USC
- Mr. Adam Jascoff, NIST, Dept. of Commerce
- Ms. Cindy Randall, FIRST (For Inspiration and Recognition of Science and Technology)

Universal Detection Technology “Using the TS-10-5 Biothreat Detection Kit”
Components of Lateral Flow

Training Session 22: *10 Reasons Why You Should Partner with DHS S&T*
Dr. Tom Cellucci, Chief Commercialization Officer DHS S&T Directorate

Training Session 28: *SBIR Tutorial*
Ms. Lisa Sobolewski, DHS S&T

Training Session 29: *Next Generation Tech Transfer: Incubation, Rapid Prototyping, Tech Scouting*

Mr. Roger London
Next Generation Technology Transfer, Kelsey Kohler, Executive Director, Watervliet Innovation Center

Training Session 30: *The Future of Wireless and First Responders*
Mr. Juan Deaton, Critical Infrastructure Protection Idaho National Laboratory

Training Session 32: *National Trends in Homeland Security Education*
Mr. Eric Frost, Co-Director, Homeland Security Master's Program, San Diego State University
Dr. Stanley Supinski, Director of Partnership Programs Naval Postgraduate School
Dr. Tracy DeWitt, Professor University of Arkansas
Dr. Hilda Blanco, University of Washington

Training Session 37: *Preparing First Responders for Food Systems Disasters*
Jerry Gillespie, DVM, PhD Director, Western Institute for Food Safety and Security

Training Session 39: *Technology Adoption & Innovation 1*
Dr. Neal Thornberry, Innovation Chair Graduate School of Business and Public Policy, Naval Postgraduate School

Training Session 41: *TechSolutions: Solutions for First Responders*
Greg Price, Director, TechSolutions DHS S&T

Training Session 42: *The SAFETY Act*
Ms. Sylvia Cabrera, Office of SAFETY Act Implementation, S&T Directorate, DHS

Training Session 44: *GIS Response to the 2007 San Diego Wildfires*
Paul Hardwick, GIS Project Manager, Center for Homeland Security, SDSU Research Foundation

Training Session 45: *Science As Diplomacy*
Panelists:

- Dr. Mayya Tokman, Professor of Applied Mathematics, University of California Merced
- Mr. Andy Perkins, Science & Innovation Officer British Consulate-General Los Angeles, CA
- Diplomatic Expert Elicitation for Intelligence, Strategy and Scientific Technology Threat, Terry O'Sullivan, PhD, Center for Risk and Economic Analysis of Terrorism Events (CREATE), University of Southern California

Training Session 48: *How Real-Time Video Distribution Changes Homeland Security Mission Profiles*

Tuesday, 15 January 2008
Science & Technology Breakout Sessions

Breakout 1: *TechSolutions: Solutions for First Responders*
Mr. Greg Price, Director, TechSolutions

Breakout Session 2: *Who you gonna call?*
Panelists:

- Colonel Daniel Nelan
- Major General Raymond F. Rees
- Lieutenant Colonel Jeff Smiley

Homeland Security Institute Overview

Breakout 3: *Advanced Technologies for First Responders and Incident Management Teams*
Jalal Mapar, Program Manager DHS S&T

Breakout 5: *Use of Modeling & Simulation for California's Golden Guardian Exercise 07*
Michael Mercer, Associate Program Manager Systems Solutions Group, Lawrence Livermore National, Laboratory

Breakout 6: *Innovation at the Edge - Accelerating University and National Lab Research to First/Early Responders*
Panelists:

- Dr. William Pottenger, Research Professor, Rutgers University
- Ms. Carol Maresca, Deputy Superintendent of Police/Deputy Director, Public Safety Department,
- NY&NJ Port Authority

Breakout 7: *Managing the cultural change when a common operational picture platform is implemented*
Mr. Wayne Tolosa, President and CEO, Future Concepts I.S., Inc.

Breakout 8 : *FirstResponder.gov*
Sonja Rodriguez Director Tech Clearinghouse Science and Technology Directorate
Sonja Rodriguez Director Tech Clearinghouse Science and Technology Directorate

Breakout 9: *Critical Infrastructure Inspection Management System Working in Maryland*
Moderator:

- Herb Engle, Program Manager, DHS S&T

Breakout 12: *Northwest Regional Technology Center for Homeland Security: A Model for Connecting State and Local Needs and DHS S&T's Research*

Wednesday, 16 January 2008
Science & Technology Breakout Sessions

Breakout 15: Chemical and Biological Division A
Anne Hultgren, PhD, Program Manager Chem Bio R&D BBranch

Breakout 16: *Borders and Maritime Security Division*
Fiscal Year 2008, Borders & Maritime Security Division, Science and Technology Directorate

- What Are You Thinking Windows Media player mpeg movie file
- Chopper Footage Windows Media player mpeg movie file
- Coalition Warrior Interoperability Windows Media player mpeg movie file
- Future Weapons Windows Media player mpeg movie file
- Track and Events Aug 21 Windows Media player mpeg movie file
- Boat Trap Windows Media player mpeg movie file
- BT COMMS Windows Media player mpeg movie file

Breakout 17: *Explosives Division A Explosives Division: Counter-IED Program and the First Responder*
Joe Foster, Program Manager Explosives Division S&T Directorate, DHS

Breakout 18: *IPT Process: Methods and Results*
Mr. Bob Hooks, Director of Transition, S&T Directorate

Breakout 20: *S&T Pilot Programs in California: A User Perspective*
Steve Weiss, Five-Year NIMS Training Plan: An Example of an HSI Task

Breakout 21: International B: Sweden RAKEL Sweden's new shared digital radio communication system for emergency management

- Mr. Stefan Kvarnerås, Swedish Emergency Management Agency
- Mr. Anders Åkeson, SAAB, EADS and Eltel Consortium

Breakout 23: *Mission and Goals of the Human Factors Division: Social-Behavioral Threat Analysis*
Sharla Rausch, Ph.D., Division Head, Human Factors Division: Social-Behavioral Threat Analysis,

Breakout 24: *Explosives Division B Response/Render Safe— Developing Future Requirements for the First Responder*

- Mr. Joe Foster, Program Manager Explosives Division S&T Directorate, DHS
- Kelly Bray, Explosives Division S&T Directorate, DHS

Breakout 27: *S&T Laboratories A: Environmental Measurements Laboratory Support to State & Local First Responders*

- Dr. Adam Hutter, Director, EML
- Mr. Lawrence Ruth, Director, Systems Division, EML

Breakout 28: *International C: United Kingdom National Police Improvement Agency*
Mr. Richard Earland, Chief Information Officer, National Police Improvement Agency

Breakout 29: Command, Control & Interoperability Division RDT&E for Emergency Responders.
Panelists:

- Chief Charles Werner, Charlottesville, VA Fire Department
- Mr. Dereck Orr, Program Manager for Public Safety Communication Standards, Office of Law Enforcement, Standards National Institute of Standards and Technology
- Dr. Carolyn Ford, Institute for Telecommunication Sciences, National Telecommunications and Information Administration
- Angela M. Ervin, Ph.D. Program Manager Chem Bio R&D Branch ChemBioR&DBran, Science and Technology Directorate Department of Homeland Security
    - Video Windows Media player video clip

Breakout 30: *Mission and Goals of the Human Factors Division: Human-Systems Research and Engineering*

- Sharla Rausch, Ph.D., Division Head, Human Factors Division:Human-Systems Research and Engineering/Biometrics
- Sharla Rausch, Ph. D, Division Head, S&T Human Factors Division: Overview

Breakout 33: *Technology Clearing House*
Ms. Sonja Rodriguez, Director, Tech Clearinghouse, DHS S&T

Breakout 34: The Transportation Security Laboratory
Dr. Susan Hallowell, Director, TSL

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- ULD seen from cargo hold Windows Media player mpeg movie file

2008 Homeland Security S&T Stakeholders Conference West

"Putting First Responders First"

Presented by NDIA with Technical Assistance from the Science & Technology Directorate, Department of Homeland Security

"All session times, topics, and speakers subject to change"

Monday January 14, 2008		**Pre-Conference Training Workshop**					
Time		***Event Title*** *(Location)*					
8:00a -5:00p		**On-Site Conference Registration**					
9:00a -4:45p		**Training Sessions** ("LES" = Law Enforcement Sensitive - separate registration required)					
9:00a-9:45a		Training Workshop Track 1 & 2 **Training Session 1-2** **Overview: Doing Business with DHS S&T** Ms. Soraya Correa, Director, Office of Procurement Operations, DHS *(confirmed)*	Training Workshop Track 3 **Training Session 3** *Science & Technology for First Responders* **Better Security via Randomization: A Game Theoretic Approach and its Operationalization at the Los Angeles International Airport** Dr. Milind Tambe Professor of Computer Science, USC *(confirmed)*	Training Workshop Track 4 **Training Session 4** *Science & Technology Training for First Responders* ***Crisis Communication 1*** **Risk Communications and Public Warnings: Briefout from the July workshop** **Moderator:** Dennis Mileti *(confirmed)*	Training Workshop Track 5 **Training Session 5** **Scholars in Homeland Security** Mr. Will McCormick SDSU	Training Workshop Track 6 **Training Session 6** *Science & Technology Training for First Responders* **IED Training for First Responders** (LES) **IED 101** **IED Lessons Learned from Iraq** Lt. Col. Max Velte, US Army	Training Workshop Track 7 **Training Session 7** *Science & Technology Training for First Responders* **ALLHAZ Providing a Common Operating Picture for Emergency Management** Elizabeth J. Matlack Director National Center for Biodefense Communications *(confirmed)*
9:45a-10:00a		**Transition Break**					
10:00a-10:45a		Training Workshop Track 1 **Training Session 8** *Doing Business with DHS S&T* **Small and Disadvantaged Business Opportunities** Ms. Phyllis Miriashtiani Small Business Advocate Office of Small and Disadvantaged Business Utilization Office of Procurement Operations, DHS *(confirmed)*	Training Workshop Track 2 **Training Session 9** **Things to Remember when Doing Business in (h)omeland (s)ecurity** Mr. David Olive Olive Edwards & Cooper, LLC *(confirmed)* Mr. Rich Cooper Olive, Edwards & Cooper, LLC *(confirmed)* David McWhorter Olive, Edwards & Cooper, LLC *(confirmed)*	Training Workshop Track 3 **Training Session 10** *Science & Technology Training for First Responders* **Interoperability Training: An Introduction to Specific Tools for Communications Interoperability Improvement** Luke Klein-Berndt CTO, CCI, DHS S&T *(confirmed)* Michael Skena, Touchstone Consulting *(confirmed)* Jeff Phaneuf, Touchstone Consulting *(confirmed)*	Training Workshop Track 4 **Training Session 11** *Science & Technology Training for First Responders* ***Crisis Communication 2*** **Risk Communications and the New Media** **Moderator:** Lynn Goldman PACER *(confirmed)* **Panelists:** Mr. Jay Alan Deputy Director for Communications, California Office of Homeland Security *(confirmed)* Mr. Michael Bustamante former Press Secretary for Governor of California	Training Workshop Track 5 **Training Session 12** *Science & Technology Training for First Responders* **IED 101** TBA National Protection & Programs Directorate, DHS	Training Workshop Track 6 **Training Session 13** **IED Training for First Responders** (LES) ***Incident Response to Terrorist Bombings 1*** EMRTC, New Mexico Tech	Training Workshop Track 7 **Training Session 14** *Science & Technology Training for First Responders* **Homeland Defense Operational Planning System (HOPS)** John Crandley Training Director, HOPS Lawrence Livermore National Laboratory *(confirmed)*

					(confirmed) Mr. Jeff Macedo, Deputy Press Secretary Governor of California *(confirmed)* TBA			
10:45a-11:00a		**Networking Coffee Break** *(TBD)*						
11:00a-11:45a		Training Workshop Track 1 **Training Session 15** *Doing Business with DHS S&T* **Current Science & Technology Business Opportunities** Ms. Wanda Armwood, Associate Director Office of Procurement Operations, DHS *(confirmed)*	Training Workshop Track 2 **Training Session 16** **What the Homeland Security Institute is and does** Mr. Phil Anderson Director HSI *(confirmed)*	Training Workshop Track 3 **Training Session 17** *Science & Technology Training for First Responders* **Federated Simulation Based Training, Exercise, and Lessons Learned** Jalal Mapar, Program Manager, IGD, DHS S&T *(confirmed)*	Training Workshop Track 4 **Training Session 18** *Science & Technology Training for First Responders* ***Crisis Communication 3*** **State Model Systems & Gaps** **Moderator:** Lynn Goldman PACER **Panelists:** Mr. Chris Logan, National Governors Association, Program Director for Homeland Security *(confirmed)*	Training Workshop Track 5 **Training Session 19** *Science & Technology Training for First Responders* **Explosive Detection Technology: What Do First Responders Really Want? Part 1** Dr. Susan Hallowell Director, TSL *(confirmed)*	Training Workshop Track 6 **Training Session 20** **IED Training for First Responders** (LES) ***Incident Response to Terrorist Bombings 2*** EMRTC, New Mexico Tech	Training Workshop Track 7 **Training Session 21** **Workforce Development at the Frontier of DHS: Relevant Science, Technology, Engineering and Mathematics** **Moderator:** Tom Kowalczyk, Office of University programs, DHS S&T *(confirmed)* **Panelists:** Dr. Mike Zyda Director of GamePipe Lab USC Dr. Isaac Maya Research Director CREATE, USC *(confirmed)* Mr. Daniel Wendel Teacher Education Program MIT *(confirmed)* Mr. Adam Jascoff NIST, Dept. of Commerce *(confirmed)* Mr. Justin Wolf, PNNL *(confirmed)* Ms. Cindy Randall FIRST (For Inspiration and Recognition of Science and Technology) *(confirmed)*
11:45a-12:00 p.		**Transition Break**						
12:00p-12:45 p		Training Workshop Track 1 **Training Session 22** *Doing Business with DHS S&T* **10 Reasons Why You Should Partner with DHS S&T** Dr. Tom Cellucci Chief Commercialization Officer DHS S&T Directorate *(confirmed)*	Training Workshop Track 2 **Training Session 23** **Homeland Security Institute** **TBA**	Training Workshop Track 3 **Training Session 24** *Science & Technology Training for First Responders* **U.S. Secret Service Escape Hood Technology** Mr. Tony Chapa Deputy Assistant Director United States Secret Service *(confirmed)*	Training Workshop Track 4 **Training Session 25** *Science & Technology Training for First Responders* ***Crisis Communication 4*** **Local Viewpoints** **Moderator:** Lynn Goldman PACER **Panelists:** Mr. Jay Alan Deputy Director for Communications, California Office of Homeland Security *(confirmed)* Mr. Ron Lane, San Diego County Emergency Services Director *(confirmed)* Ms. Ladona Harvey, Morning News Anchor KOGO 600 AM Radio San Diego, CA *(confirmed)*	Training Workshop Track 5 **Training Session 26** *Science & Technology Training for First Responders* **Explosive Detection Technology: What Do First Responders Really Want? Part 2** Dr. Susan Hallowell Director, TSL *(confirmed)*	Training Workshop Track 6 **Training Session 27** **IED Training for First Responders** (LES) ***Incident Response to Terrorist Bombings 3*** EMRTC, New Mexico Tech	
12:45p-2:00p		**No-Host Networking Lunch in Convention Center Food Court**						

	Training Workshop Track 1	Training Workshop Track 2	Training Workshop Track 3	Training Workshop Track 4	Training Workshop Track 5	Training Workshop Track 6	Training Workshop Track 7
2:00p-2:45p	**Training Session 28** *Doing Business with DHS S&T* **SBIR Tutorial** Ms. Lisa Sobolewski DHS S&T *(confirmed)*	**Training Session 29** **Next Generation Tech Transfer: Incubation, Rapid Prototyping, Tech Scouting** Mr. Roger London, *(confirmed)*	**Training Session 30** *Science & Technology Training for First Responders* **The Future of Wireless and First Responders** Mr. Juan Deaton Critical Infrastructure Protection Idaho National Laboratory *(confirmed)*	**Training Session 31** *Science & Technology Training for First Responders* ***Crisis Communication 5*** **How Do You Communicate During a Crisis?** ***A live broadcast on the "Homeland Security Inside & Out" radio program*** **Moderator:** Dr. David McIntyre, Texas A&M University; Director, Integrative Center for Homeland Security at Texas A&M University, Co-Host, "*Homeland Security Inside & Out*" **Media Panelists:** Allison Barrie, FOX News TBA	**Training Session 32** **National Trends in Homeland Security Education** Mr. Eric Frost Co-Director, Homeland Security Master's Program San Diego State University *(confirmed)* Dr. Stanley Supinski Director of Partnership Programs Naval Postgraduate School *(confirmed)* Dr. Tracy DeWitt Professor University of Arkansas *(confirmed)* Dr. Hilda Blanco University of Washington *(confirmed)*	**Training Session 33** **IED Training for First Responders** (LES) ***Incident Response to Terrorist Bombings 4*** EMRTC, New Mexico Tech	**Training Session 34** **SIGMA: Science Fiction in the National Interest** **Moderator:** Dr. Arlan Andrews, Sr. **Panelists:** Greg Bear David Brin Michael Cassutt Larry Niven Jerry Pournelle Walter Jon Williams
2:45p-3:00p	**Networking Coffee Break** *(TBD)*						
3:00p-3:45p	**Training Session 35** *Doing Business with DHS S&T* **Raising Capital Panel: Harnessing Global Security Opportunities** **Moderator:** Mr. Tom Cellucci Chief Commercialization Officer DHS S&T Directorate *(confirmed)* **Panelists:** Matt McCooe Managing Partner Chart Venture Partners Ms. Kelsey Kohler Executive Director Watervliet Innovation Center	**Training Session 36** **Best Practices In Leveraging The DHS Consolidated Acquisition Strategy** Mr. Sean Burke President, Govplace *(confirmed)*	**Training Session 37** *Science & Technology Training for First Responders* **Preparing First Responders for Food Systems Disasters** Jerry Gillespie, DVM, PhD Director, Western Institute for Food Safety and Security Paul Friedrich DHS Agroterrorism Preparedness Curriculum Coordinator Western Institute for Food Safety and Security	**Training Session 38** **Blogging for Technology: Science and the New Media** **Moderator:** Mr. Matt Armstrong Publisher www.mountainrunner.us *(confirmed)* **Panelists:** Allison Barrie, FOX News *(confirmed)* TBA	**Training Session 39** **Technology Adoption & Innovation 1** Dr. Neal Thornberry Innovation Chair Graduate School of Business and Public Policy Naval Postgraduate School Dr. Anita Salem Research Associate Center for Defense Management Reform Graduate School of Business and Public Policy Naval Postgraduate School	**Training Session 40** **IED Training for First Responders** (LES) ***Incident Response to Terrorist Bombings 5*** EMRTC, New Mexico Tech	**Training Session 41** *Science & Technology Training for First Responders* **TechSolutions*:* Solutions for First Responders** Greg Price Director, TechSolutions DHS S&T *(confirmed)*
3:45p-4:00p	**Transition Break**						

		Training Workshop Track 1	Training Workshop Track 2	Training Workshop Track 3	Training Workshop Track 4	Training Workshop Track 5	Training Workshop Track 6	Training Workshop Track 7
		Training Session 42	**Training Session 43**	**Training Session 44**	**Training Session 45**	**Training Session 46**	**Training Session 47**	**Training Session 48**
4:00p-4:45p		*Doing Business with DHS S&T* **The SAFETY Act** Ms. Sylvia Cabrera Office of SAFETY Act Implementation S&T Directorate, DHS *(confirmed)*	**The American Security Challenge** Mr. Roger London *(confirmed)*	*Science & Technology Training for First Responders* **GIS Response to the 2007 San Diego Wildfires** Paul Hardwick GIS Project Manager Center for Homeland Security, SDSU Research Foundation *(confirmed)*	**Science As Diplomacy** **Moderator:** Mr. Matt Armstrong Publisher www.mountainrunner.us *(confirmed)* **Panelists:** Dr. Mayya Tokman Professor of Applied Mathematics University of California Merced Mr. Andy Perkins Science & Innovation Officer British Consulate-General Los Angeles, CA	**Technology Adoption & Innovation 2** Dr. Neal Thornberry Innovation Chair Graduate School of Business and Public Policy Naval Postgraduate School *(confirmed)* Dr. Anita Salem Research Associate Center for Defense Management Reform Graduate School of Business and Public Policy Naval Postgraduate School *(confirmed)*	**IED Training for First Responders** (LES) ***Incident Response to Terrorist Bombings 6*** EMRTC, New Mexico Tech	**How Real-Time Video Distribution Changes Homeland Security Mission Profiles**
4:45p-5:00p		**Transition Break**						
5:00p		**Exhibit Hall Ribbon Cutting**						
5:00p-7:00p		**"Salute to Law Enforcement" Welcome Reception in Exhibit Hall**						
7:00p		**Exhibit Hall closes**						

Tuesday January 15, 2008		**2008 Homeland Security S&T Stakeholders Conference West** ***"Putting First Responders First"*** **Day 1 - Morning Session**
Time		***Event Title*** *(Location)*
7:00a-5:00p		**On-Site Conference Registration & Information**
8:00a-9:00a		**Continental Breakfast**
9:00a-6:00p		**Exhibit Hall Open**
9:00a-4:00p *(In parallel with other activities)*		**Innovation Gateway Marketplace Networking** *(By appointment only – abstract submittal in advance required)* **SAFETY Act Pre-Application Consulting** *(By appointment only in SAFETY Act Booth)*
8:30a-9:00a		**nTag Training Session and Audience Surveys**

9:00a-9:10a		**Opening Ceremony** **Conference Overview & General Info** Maj. Gen. Barry Bates, USA (Ret.), Director of Operations, NDIA *(confirmed)*
9:10a-9:20a		**Conference Host Welcome** TBA **Welcome & Introduction of Under Secretary for Science & Technology** Mr. Matthew Bettenhausen, Executive Director, State of California/Governor's Office of Homeland Security *(confirmed)*
9:20a-9:30a		**Opening Remarks and Introduction of Keynote Speaker** The Honorable Jay M. Cohen, Under Secretary, Science and Technology, DHS *(confirmed)*
9:30a-9:50a		**Keynote Speaker** TBA
9:50a-10:10a		**Science & Technology Directorate Keynote** The Honorable Jay M. Cohen, Under Secretary, Science and Technology, DHS *(confirmed)*
10:10a-10:40a		**Networking Coffee Break** *(TBD)*
10:40a-11:00a		**Keynote Speaker** Mr. Erroll G. Southers, Chief of Intelligence and Counter-Terrorism, Los Angeles World Airports Police Department *(confirmed)*
11:00a-11:45p		**S&T Challenges Affecting the States** *(TBD)* **Moderator:** Ms. Linda Vasta , Director, West Coast Operations, Interagency Coordination Office, S&T Directorate, DHS *(confirmed)* **Panelists:** Mr. Matthew Bettenhausen, Executive Director, State of California/Governor's Office of Homeland Security *(confirmed)* Mr. Kerry Sleeper, Commissioner, Vermont Department of Public Safety *(confirmed)* BG Mike McDaniel, Homeland Security Advisor, Michigan Department of Military & Veterans Affairs *(confirmed)* Ms. Annzell Loufas, Director, California Council on S&T *(invited)*
11:45a-12:30p		**S&T Challenges Affecting First Responders** *(TBD)* **Moderator:** Mr. Glenn Cannon, Director, Response Division, FEMA *(confirmed)* **Panelists:** Chief Robert Ingram, Branch Chief for WMD, Fire Department, City of New York *(confirmed)* Mr. James T. Butts, Jr., Deputy Executive Director, Airport Law Enforcement and Protective Services, Los Angeles World Airports *(confirmed)* Mr. John Powell, Chairman, California Statewide Interoperability Executive Committee (CALSIEC) *(invited)* Commander Bob Sedita, County of Los Angeles Sheriff's Department *(confirmed)* Mr. Richard Earland, Chief Information Officer, National Police Improvement Agency, United Kingdom *(confirmed)* Captain Jeff Winn, Commander, Research and Planning, New Orleans Police Department *(invited)*
12:30p-2:00p		**Networking Lunch in Exhibit Hall**

Tuesday ***January 15, 2008***		**2008 Homeland Security S&T Stakeholders Conference West** ***"Putting First Responders First"*** **Day 1 - Afternoon Session**
Time		***Event Title*** *(Location)*

2:00p-4:30p		***"View Exhibits Only"* admission to Exhibit Hall**
2:00p-2:20p		**First Responder Technologies (R-Tech)** Mr. Jose Vasquez, Director, Director, First Responder Technologies , S&T Directorate, DHS *(confirmed)*
2:20p-2:50p		**Secure Against Fires & Embers (SAFE)** TBA
2:50p-3:00p		**Anaheim Enterprise Virtual Operations Center (EVOC)** Mr. Tom Wood, Assistant City Manager/COO, City of Anaheim, California *(confirmed)*
3:00p-3:15p		**Transition Break**
		Science & Technology Breakout Sessions

		S&T Track 1 **Breakout 1**	S&T Track 2 **Breakout 2**	S&T Track 3 **Breakout 3**	S&T Track 4 **Breakout 4**	S&T Track 5 **Breakout 5**	S&T Track 6 **Breakout 6**	S&T Track 7 **Breakout 7**
3:15p-4:00p		**TechSolutions*:* Solutions for First Responders** Mr. Greg Price Director, TechSolutions DHS S&T	***Who you gonna call?*** **The National Guard's First Responder Role** **Moderator:** Col. Michael Smith, USA (Ret.), Senior Advisor, Office Interagency Programs, DHS S&T *(confirmed)* **Panelists:** TBA	**Advanced Technologies for First Responders and Incident Management Teams** Jalal Mapar, Program Manager DHS S&T *(confirmed)*	**California Burning: Lessons Learned**	**Use of Modeling & Simulation for California's Golden Guardian Exercise 07** Michael Mercer Associate Program Manager Systems Solutions Group Lawrence Livermore National Laboratory *(confirmed)* Patrick T. Hammond Sr. Homeland Security Training Professional California Office of Homeland Security *(confirmed)* Sergeant Brian McElhaney Homeland Security Bureau Anaheim Police Department *(confirmed)* Battalion Chief Tim O'Hara Homeland Security Manager Anaheim Fire Department *(confirmed)*	**Innovation at the Edge - Accelerating University and National Lab Research to First/Early Responders** **Moderator:** Tom Kowalczyk, Office of University programs, DHS S&T *(confirmed)* **Panelists:** Dr. William Pottenger Research Professor Rutgers University *(confirmed)* Dr. Richard May Chief Scientist Visual Analytics PNNL *(confirmed)* Ms. Carol Maresca Deputy Superintendent of Police/ Deputy Director Public Safety Department, NY&NJ Port Authority *(confirmed)* Mr. Gerard Lorden Morgan Stanley *(confirmed)*	**Managing the cultural change when a common operational picture platform is implemented** Mr. Wayne Tolosa President and CEO Future Concepts I.S., Inc.
4:00p-4:15p		**Transition Break**						

		S&T Track 1 **Breakout 8**	S&T Track 2 **Breakout 9**	S&T Track 3 **Breakout 10**	S&T Track 4 **Breakout 11**	S&T Track 5 **Breakout 12**	S&T Track 6 **Breakout 13**	S&T Track 7 **Breakout 14**
4:15p-5:00p		**FirstResponder.gov**	**Critical Infrastructure Inspection Management System (CIIMS) Working in Maryland** **Moderator:** Herb Engle, Program Manager, DHS S&T *(confirmed)* **Panelists:** LT. Mark Gibbons, Maryland State Police *(confirmed)* Sgt. Chad Gainey, Maryland State Police *(confirmed)* Mr. Dan Rice Aviation Command Maryland State Police Mr. Mark Gabriele Applied Physics Laboratory Johns Hopkins University *(confirmed)*	**IED 101** LAPD Bomb Squad	**Katrina: Law Enforcement Lessons Learned** Captain Jeff Winn Commander, Research and Planning New Orleans Police Department *(confirmed)*	**Northwest Regional Technology Center for Homeland Security: A Model for Connecting State and Local Needs and DHS S&T's Research Agenda** Steve Stein, Director NW Regional Technology Center for Homeland Security Pacific Northwest National Labs *(confirmed)* Mary E Peterson Pacific Northwest National Labs *(confirmed)* Ann M Lesperance Pacific Northwest National Labs *(confirmed)*	**Anaheim Enterprise Virtual Operations Center (EVOC)** Mr. Tom Wood, Assistant City Manager/COO, City of Anaheim, California *(confirmed)*	*International A:* **Lessons Learned from Israel** Major General Doron Almog Executive Chairman, Athlone Global Security *(confirmed)*
4:30p		**"*View Exhibits Only*" admission to Exhibit Hall ends**						
5:00p-7:00p		**"Fire Fighters Salute" Reception in Exhibit Hall**						
7:00p		**Exhibit Hall Closes**						

Wednesday, January 16, 2008		**2008 Homeland Security S&T Stakeholders Conference West** ***"Putting First Responders First"*** **Day 2 - Morning Session**
Time		***Event Title*** *(Location)*
8:00a-5:00p		**On-Site Conference Registration & Information**
8:00a-9:00a		**Continental Breakfast** *(TBD)*
9:00a-6:00p		**Exhibit Hall Open**
9:00a-4:00p		**"*View Exhibits Only*" admission to Exhibit Hall**
9:00a-4:00p *(In parallel with other activities)*		**Innovation Gateway Marketplace Networking** *(By appointment only – abstract submittal in advance required)* **SAFETY Act Pre-Application Consulting** *(By appointment only in SAFETY Act Booth)*

9:00a-9:15a		**Host Remarks**
9:15a-9:25a		**The DHS Science & Technology Directorate** The Honorable Jay M. Cohen, Under Secretary, Science and Technology, DHS *(confirmed)*
9:25a-10:25a		**S&T Directorate Division Heads Panel** Mr. Jim Tuttle, Explosives Division *(confirmed)* Dr. Beth George, Chemical & Biological Division (*Acting) (confirmed)* Dr. David Boyd, Command, Control & Interoperability Division *(confirmed)* CAPT David Newton, USCG, Borders & Maritime Security Division (*Acting) (confirmed)* Dr. Sharla Rausch, Human Factors Division *(confirmed)* Mr. Christopher Doyle, Infrastructure & Geophysical Division *(confirmed)*
10:25a-10:40a		**T&E and Standards** Mr. George Ryan, Director, Test & Evaluation and Standards, S&T Directorate, DHS *(confirmed)*
10:40-11:10a		**Networking Coffee Break** *(Exhibit Hall)*
11:10a-12:10p		**S&T Portfolio Directors Panel** Mr. Robert Hooks, Director of Transition *(confirmed)* Dr. Roger McGinnis, Director of Innovation / HSARPA *(confirmed)* Dr. Starnes Walker, Director of Research *(confirmed)*
12:10p-12:20p		**Basic Research to Enable a Safer Nation** Mr. Bryan Roberts, Program Manager and Economist, University Programs, S&T Directorate, DHS *(confirmed)* Mr. James Johnson, Director, Office of National Laboratories, S&T Directorate, DHS *(confirmed)*
12:20p-12:30p		**Los Angeles Regional Common Operational Picture Program (LARCOPP)** TBA
12:30p-2:00p		***Networking Lunch in Exhibit Hall***

Wednesday January 16, 2008		**2008 Homeland Security S&T Stakeholders Conference West** ***"Putting First Responders First"*** **Day 2 - Afternoon Session**
Time		***Event Title*** *(Location)*
2:00p-4:30p		***"View Exhibits Only"*** **admission to Exhibit Hall**
		Science & Technology Breakout Sessions

		S&T Track 1 **Breakout 15** **Chemical and Biological Division A**	**S&T Track 2** **Breakout 16** **Borders and Maritime Security Division**	**S&T Track 3** **Breakout 17** *Explosives Division A* **Explosives Division: Counter-IED Program and the First Responder** Mr. Jim Tuttle, Head Explosives Division, S&T Directorate, DHS *(confirmed)* Joe Foster Program Manager Explosives Division S&T Directorate, DHS *(confirmed)* Kelly Bray Explosives Division S&T Directorate, DHS *(confirmed)*	**S&T Track 4** **Breakout 18** **IPT Process: Methods and Results** Mr. Bob Hooks Director of Transition, S&T Directorate *(confirmed)*	**S&T Track 5** **Breakout 19** *University Programs A:* **TBA**	**S&T Track 6** **Breakout 20** **S&T Pilot Programs in California: A User Perspective** Lawrence Livermore National Laboratory	**S&T Track 7** **Breakout 21** *International B:* **Sweden** **RAKEL** **Sweden's new shared digital radio communication system for emergency management** Mr. Stefan Kvarnerås, Swedish Emergency Management Agency *(confirmed)* Mr. Anders Åkeson SAAB, EADS and Eltel Consortium *(confirmed)*
2:00-2:45 p.m.								
2:45-3:00 p.m.		**Transition Break**						
		S&T Track 1 **Breakout 22** **Chemical and Biological Division B**	**S&T Track 2** **Breakout 23** **Mission and Goals of the Human Factors Division: Social-Behavioral Threat Analysis** Allison Smith Program Lead for Radicalization Research HFD, DHS S&T *(confirmed)* Mike Dunaway Program Manager Community Preparedness and Resilience Projects HFD, DHS S&T *(confirmed)*	**S&T Track 3** **Breakout 24** *Explosives Division B* **Response/Render Safe—Developing Future Requirements for the First Responder** Mr. Jim Tuttle, Head Explosives Division, S&T Directorate, DHS *(confirmed)* Mr. Joe Foster Program Manager Explosives Division S&T Directorate, DHS *(confirmed)* Kelly Bray Explosives Division S&T Directorate, DHS *(confirmed)*	**S&T Track 4** **Breakout 25** **Special Programs** Mr. Spanky Kirsch, Director, Special Programs, DHS S&T *(confirmed)*	**S&T Track 5** **Breakout 26** *University Programs B:* **TBA**	**S&T Track 6** **Breakout 27** *S&T Laboratories A:* **Environmental Measurements Laboratory Support to State & Local First Responders** Dr. Adam Hutter, Director, EML *(confirmed)* Mr. Lawrence Ruth, Director, Systems Division (acting), EML *(confirmed)*	**S&T Track 7** **Breakout 28** *International C:* **United Kingdom** **National Police Improvement Agency** Mr. Richard Earland Chief Information Officer National Police Improvement Agency *(confirmed)*
3:00-3:45 p.m.								
3:45-4:00 p.m.		**Transition Break**						

		S&T Track 1 **Breakout 29**	S&T Track 2 **Breakout 30**	S&T Track 3 **Breakout 31**	S&T Track 4 **Breakout 32**	S&T Track 5 **Breakout 33**	S&T Track 6 **Breakout 34**	S&T Track 7 **Breakout 35**
4:00-4:45 p.m.		**Command, Control & Interoperability Division** **RDT&E for Emergency Responders.** **Moderator:** Mr. Luke Klein-Berndt Chief Technology Officer Command, Control and Interoperability Division, DHS S&T *(confirmed)* **Panelists:** Chief Charles Werner, Charlottesville, VA Fire Department Mr. Dereck Orr Program Manager for Public Safety Communication Standards Office of Law Enforcement Standards National Institute of Standards and Technology Dr. Carolyn Ford, Institute for Telecommunication Sciences, National Telecommunications and Information Administration	**Mission and Goals of the Human Factors Division: Human-Systems Research and Engineering** Chris Miles Biometrics Program Manager HFD, DHS S&T *(confirmed)* Darren Wilson Human Systems Research and Engineering Program Manager HFD, DHS S&T *(confirmed)*	**Infrastructure and Geophysical Division** Mr. Christopher Doyle, Head Infrastructure & Geophysical Division *(confirmed)* Jalal Mapar, Program Manager DHS S&T *(confirmed)*	**1401 Technology Transfer Process** Mr. Bob Hooks Director of Transition, S&T Directorate *(confirmed)*	**Technology Clearing House** Mr. Jose Vazquez, Director Rapid Technology Insertion, DHS S&T *(confirmed)* Ms. Sonja Rodriguez, Director, Tech Clearinghouse, DHS S&T *(confirmed)*	*S &T Laboratories B:* **The Transportation Security Laboratory** Dr. Susan Hallowell Director, TSL *(confirmed)*	**HIPS & HITS** **The 10% Solution: High Risk, Hugh Payoffs** Rolf Dietrich. P.E. Director, Homeworks DHS S&T *(confirmed)*
4:00p		***"View Exhibits Only"* admission to Exhibit Hall ends**						
5:00p-7:00p		**"Emergency Management and Medical Services Salute" Reception in Exhibit Hall**						
7:00p		**Exhibit Hall Closes**						

Thursday January 17, 2008		**2008 Homeland Security S&T Stakeholders Conference West** ***"Putting First Responders First"*** **Day 3 - Morning Session**
Time		***Event Title*** *(Location)*
8:00a-12:00p		**On-Site Conference Registration & Information**
8:00a-9:00a		**Continental Breakfast** *(TBD)*
9:00a-9:05a		**Host Welcome & Introduction** *(TBD)*
9:05a-9:30a		**TBA**

9:30a-11:00a		**International Perspectives on S&T Research for Homeland Security** *(TBD)* M**oderators:** Mr. Gary Jensen, Director, Asia-Pacific Liaison, International Programs Office, DHS S&T Directorate *(confirmed)* Mr. Matthew Bettenhausen, Executive Director, State of California/Governor's Office of Homeland Security *(confirmed)* **Panelists:** **Australia:** *TBA* **Canada:** Chief Superintendent Bud Mercer, Deputy Criminal Operations Officer, Federal Policing Services, Royal Canadian Mounted Police *(invited)* **Israel:** Mr. Assaf Heffetz, former Commissioner of the Israel National Police *(invited)* Major General Doron Almog, Executive Chairman, Athlone Global Security *(invited)* **Sweden:** Mr. Ivar Rönnbäck, Deputy Director-General, Swedish Rescue Services Agency *(confirmed)* **United Kingdom:** Mr. Richard Earland, Chief Information Officer, National Police Improvement Agency, United Kingdom *(confirmed)*
11:00a-11:30a		**Networking Coffee Break** *(TBD)*
11:30a-12:30p		**Interagency Partnerships in S&T Research for Homeland Security** *(TBD)* **Moderator:** Mr. Randy Zeller, Director, Interagency Coordination, S&T Directorate, DHS *(confirmed)* **Panelists:** CAPT Paul Wiedenhoeft, USCG, Sector Commander/Captain of the Port, U.S. Coast Guard Sector Los Angeles - Long Beach *(confirmed)* Mr. Mark Denari, Director, Aviation Security & Public Safety, San Diego County Regional Airport Authority *(confirmed)* Mr. Daniel Hartwig, Manager of Security Programs, Bay Area Rapid Transit (BART), San Francisco *(invited)* TBA
12:30a-1:00p		**Closing Remarks & Recognition** *(TBD)* The Honorable Jay M. Cohen, Under Secretary for Science and Technology, DHS *(confirmed)*
1:00 p.m.		**Conference Sessions End**
1:00p-2:00p		**Post-Conference No-Host networking lunch in Convention Center Food Court** *(TBD)*

Thursday January 17, 2008		**Post-Conference Training Workshop**
1:00p -6:00p		**Training Sessions** ("LES" = Law Enforcement Sensitive - separate registration required)
1:00p-2:45p		**IED Training for First Responders** (LES) Transportation Security Laboratory
2:45p-3:00p		**Break**
3:00p-3:45p		**IED Training for First Responders** (LES) Transportation Security Laboratory
3:45p-4:00p		**Break**
4:00p-4:45p		**IED Training for First Responders** (LES) Transportation Security Laboratory

4:45p-5:00p		**Break**
5:00p-6:00p		**IED Training for First Responders** (LES) Transportation Security Laboratory
6:00 p.m.		**Post-Conference Training Workshop Sessions End**

S&T Stakeholders Conference

January 14-18, 2008

Advanced Technologies for First Responders and Incident Management Teams

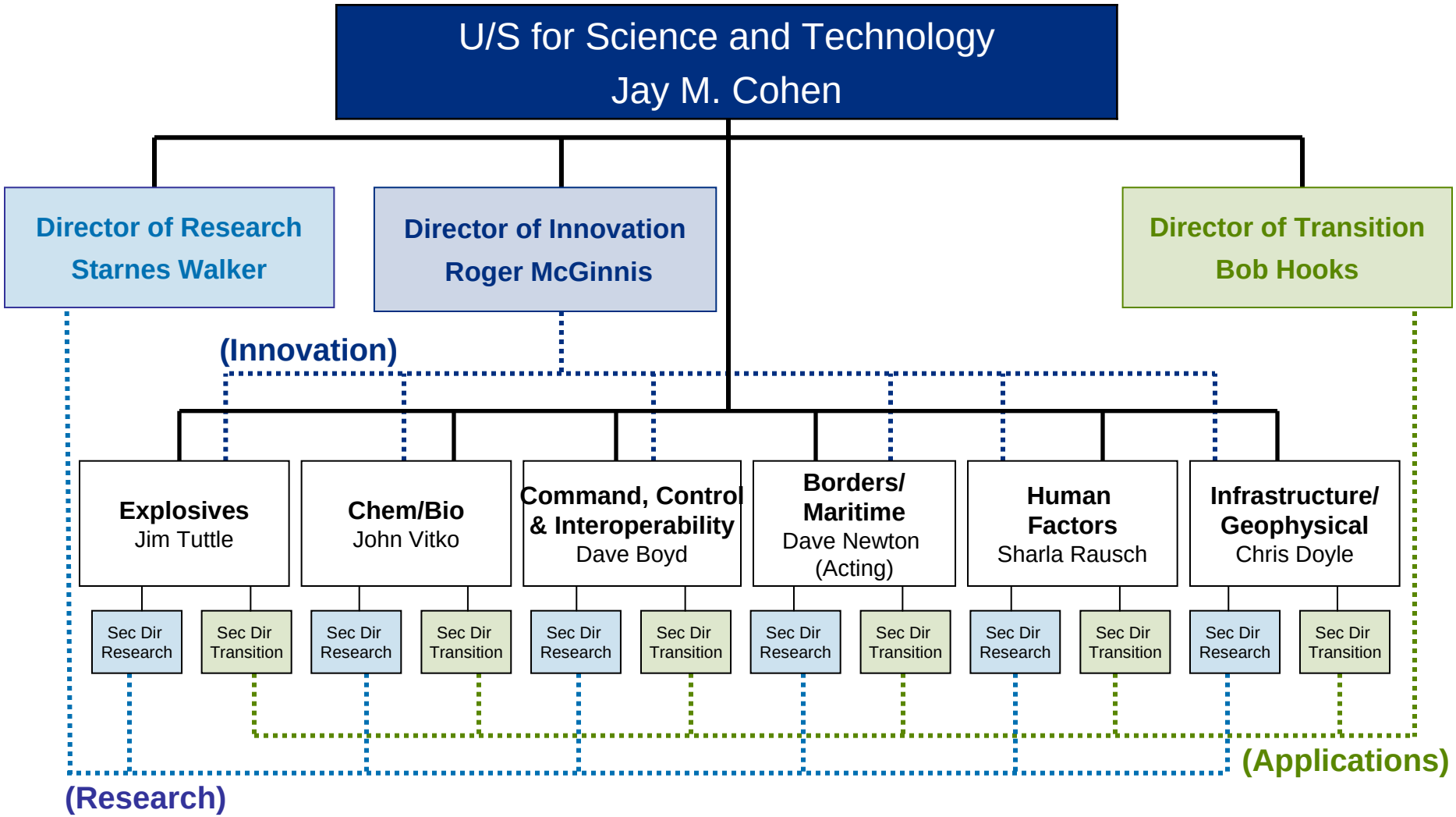
Jalal Mapar

Infrastructure & Geophysical Division

Science and Technology Directorate

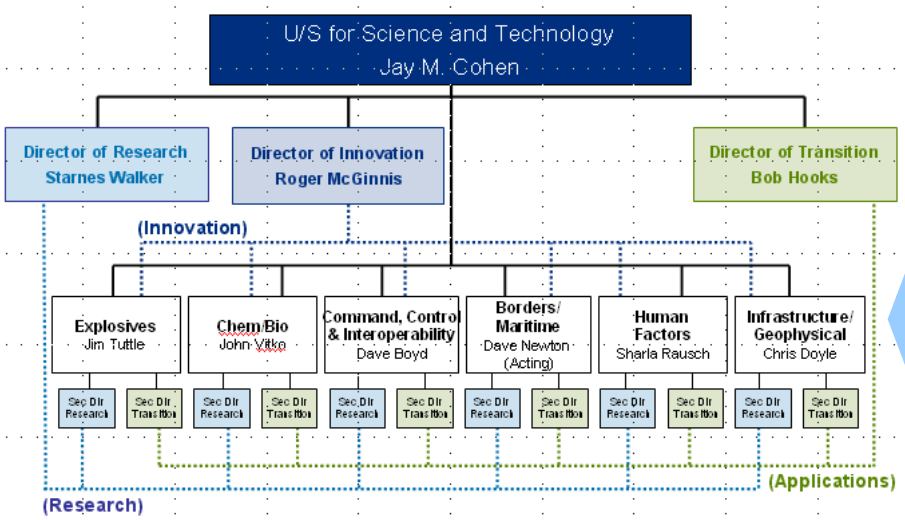
Homeland Security

DHS S&T Directorate

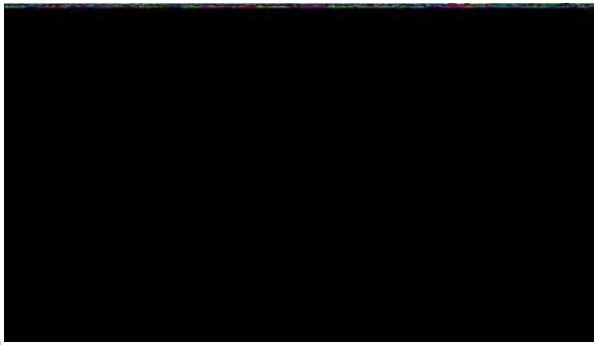


Homeland Security

Infrastructure and Geophysical Division



- **Objectives**
  - Develop capabilities to identify and mitigate the vulnerabilities of the 17 critical infrastructure and improve the ability of the Nation to prepare for, respond to, and recover from all-hazards emergencies to keep our society and economy functioning
- **Program Elements**
  - Critical Infrastructure Protection
  - Preparedness & Response
  - Geophysical



Homeland Security

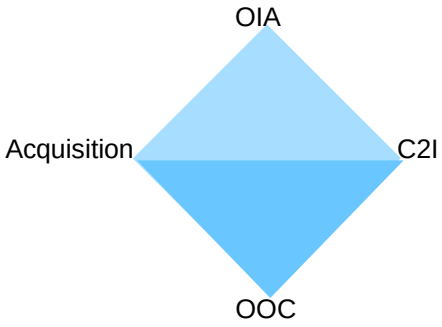
Preparedness & Response

- Objectives
  - Enhance first responders ability to prepare for, respond to and recover from all-hazards emergencies through development and deployment of enabling technologies
- Customer
  - DHS/FEMA *(primary)*, and others (CBP, CG, TSA, …)
- End-User
  - 44,000 Emergency Response Organizations
  - 18,000 Law Enforcement Agencies
  - 30,000 Fire Departments
  - 83,000 State/Local Governments

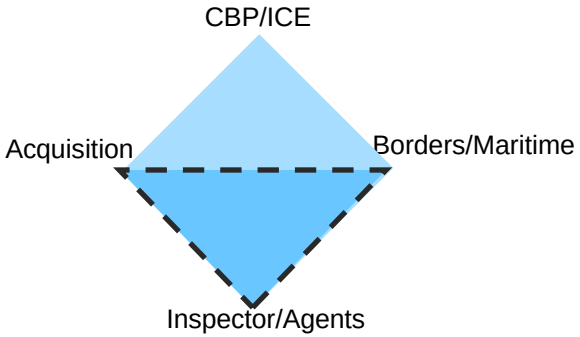
Homeland Security

Homeland Security Capability IPTs

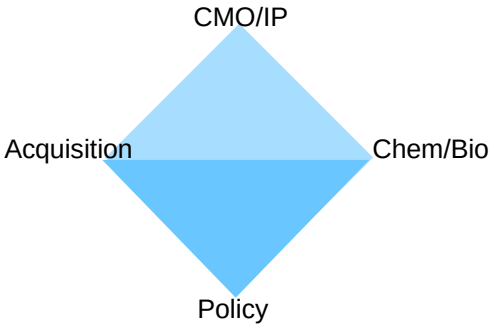
Information Sharing/Mgmt



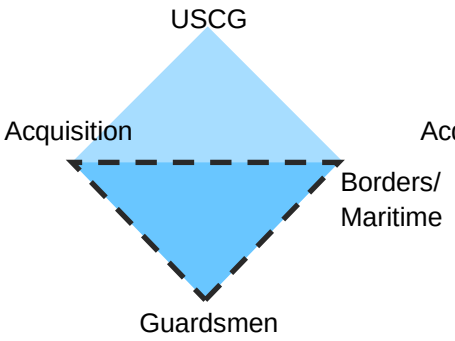
Border Security



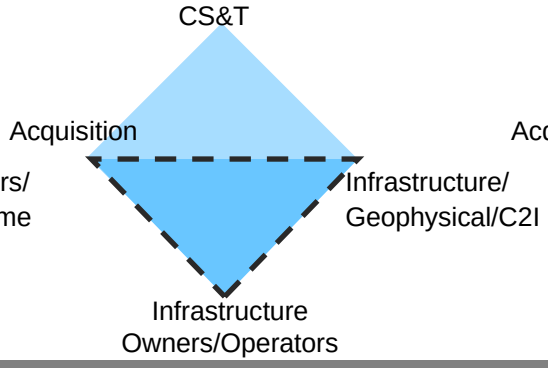
Chem/Bio Defense



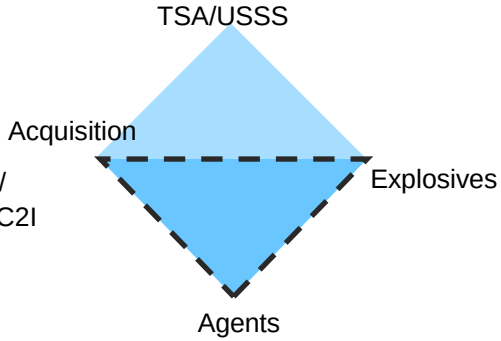
Maritime Security



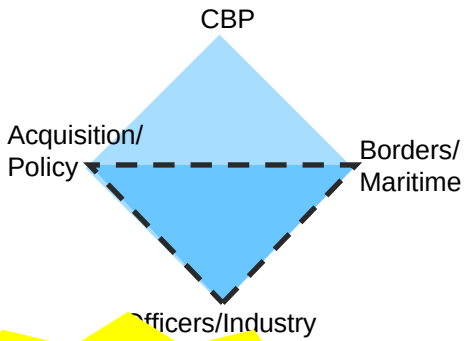
Cyber Security



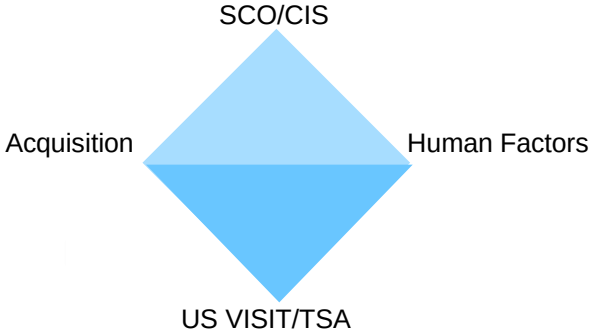
Explosive Prevention



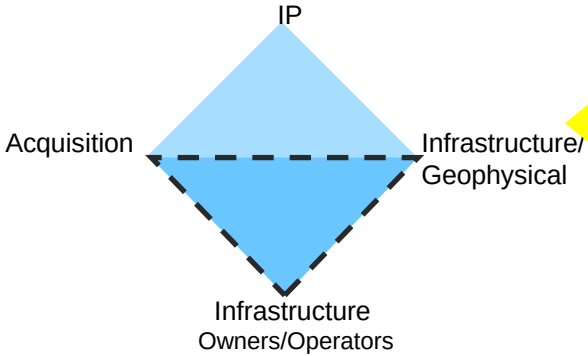
Cargo Security



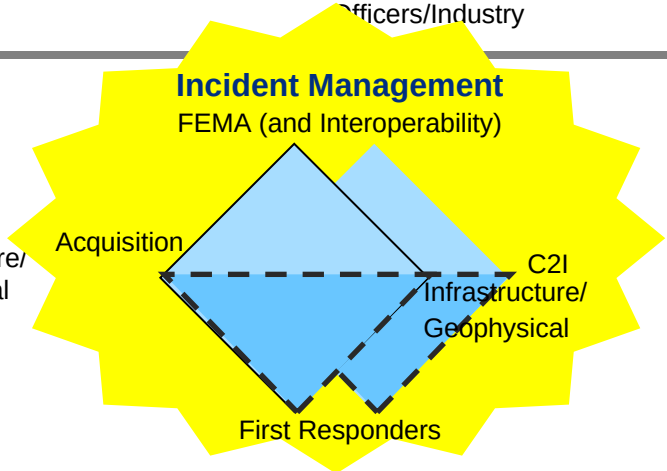
People Screening



Infrastructure Protection



Incident Management



Incident Management IPT

- **Capstone IPT Leads are from FEMA and S&T**
  - FEMA: Ret. VADM Harvey Johnson, Deputy Director/COO
  - S&T: Chris Doyle, Director, Infrastructure and Geophysical Division
- **Participants**
  - FEMA (primary), CBP, USCG, TSA, ICE, USSS
- **Process**
  - Several rounds identified prioritized capabilities
    - *S&T Projects established to develop technologies for out years*
- **Outcome**
  - Resource-constrained, prioritized list of out-year Capability gaps and Project areas

Simulation Based Incident Planning and Response

1st Responder Equipment

Common Operating Picture & Situational Awareness

Homeland Security

Preparedness & Response

Infrastructure and Geophysical

Preparedness & Response

Integrated Modeling, Mapping, & Simulation

Emergency Responder Technology

- *Responder Tracking System*
- *Physiological Monitoring System*

Incident Management Enterprise

Homeland Security

Emergency Responder Technology

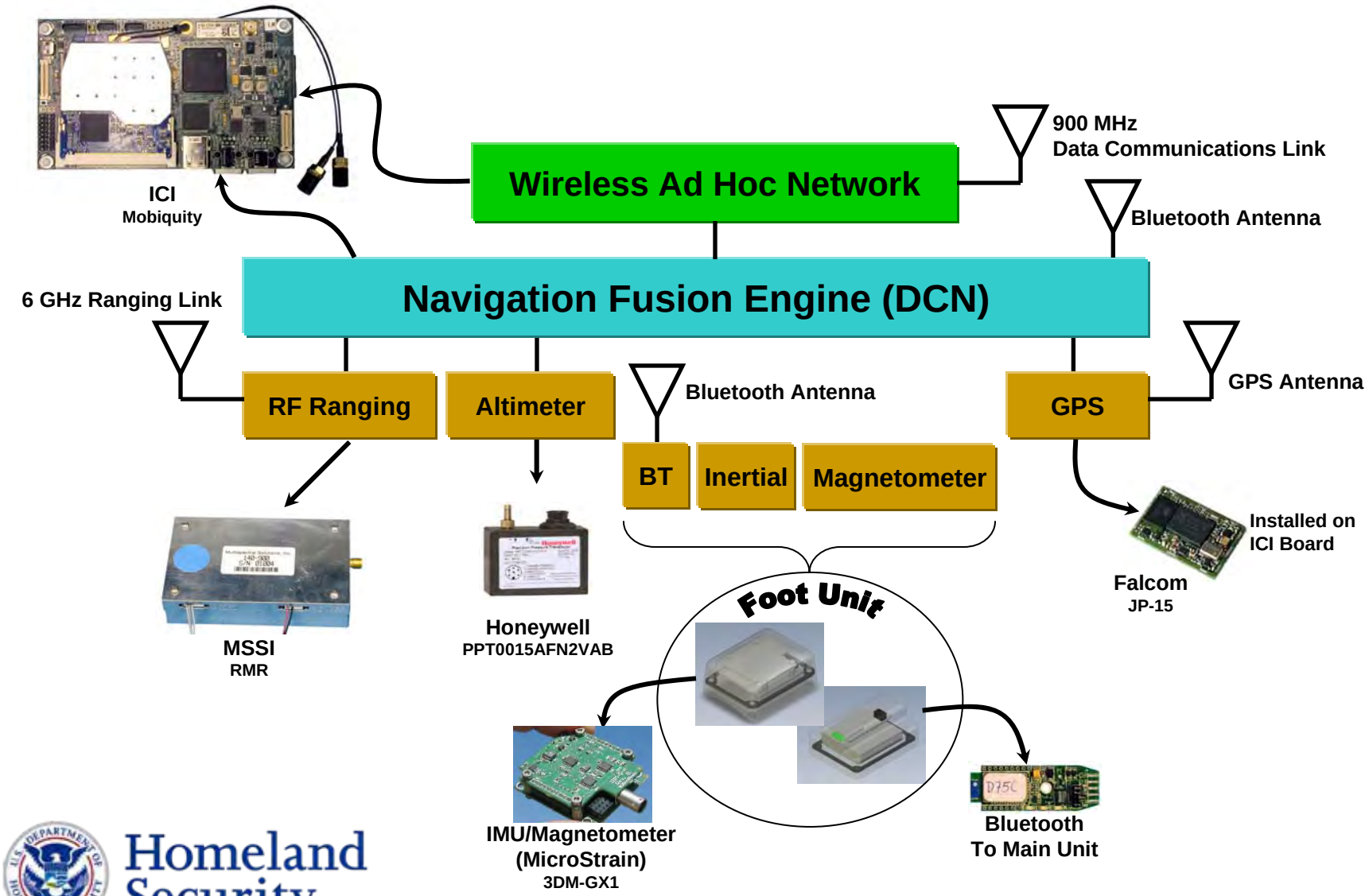
- **Responder Tracking System**
  - Real-time positioning and status of first responders to incident commanders

- **Physiological Monitoring System**
  - Improve incident commanders situational awareness through real-time health status of first responders

Future Deployment: *Provide technology for the SEL & AEL for jurisdictions to purchase*
Cross-functional Values: Technologies for USCG, CBP, and other LE and EMS groups

Homeland Security

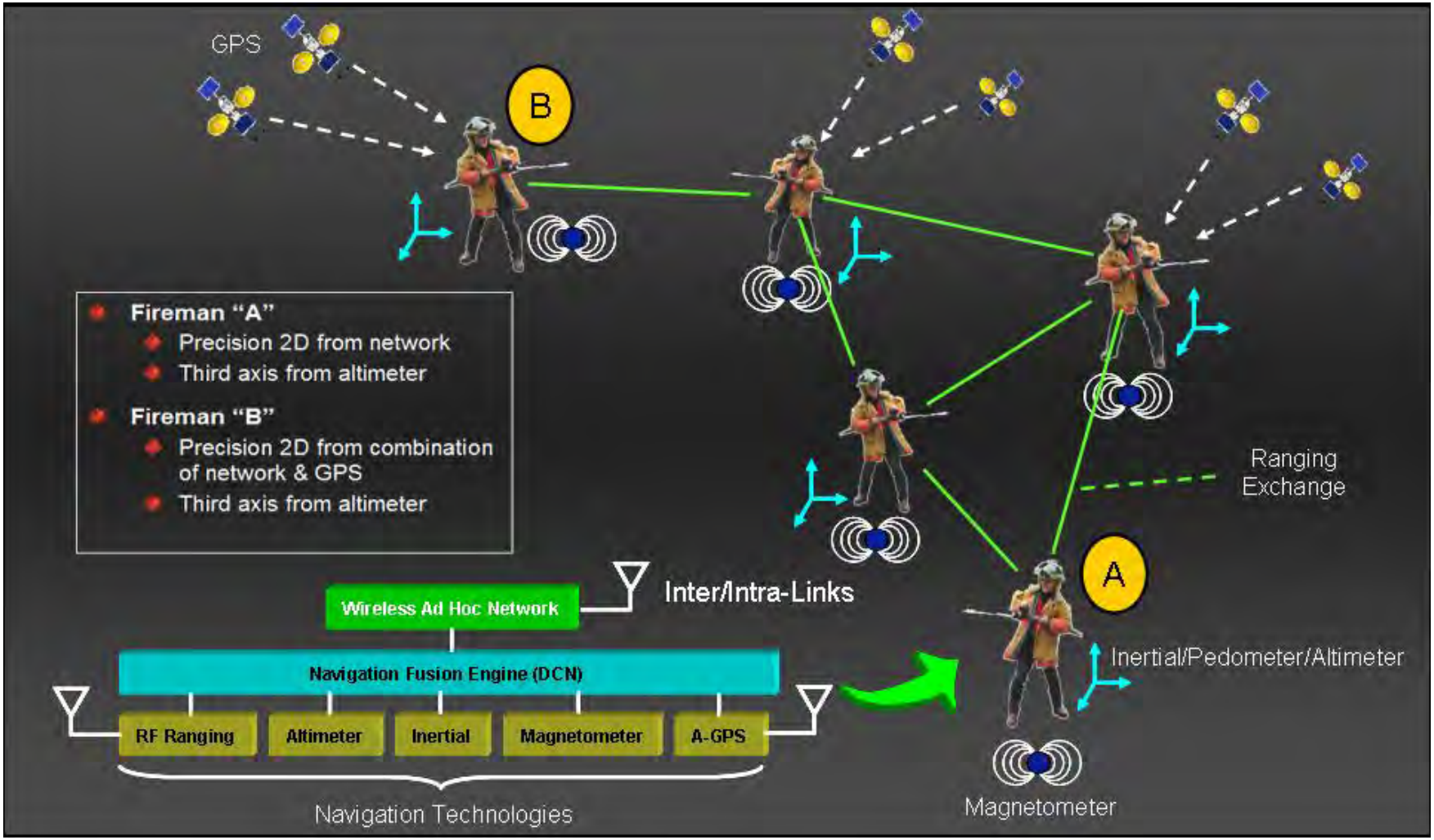
Responder Tracking System - Sensor Development



Homeland Security

Responder Tracking System – Staying Connected

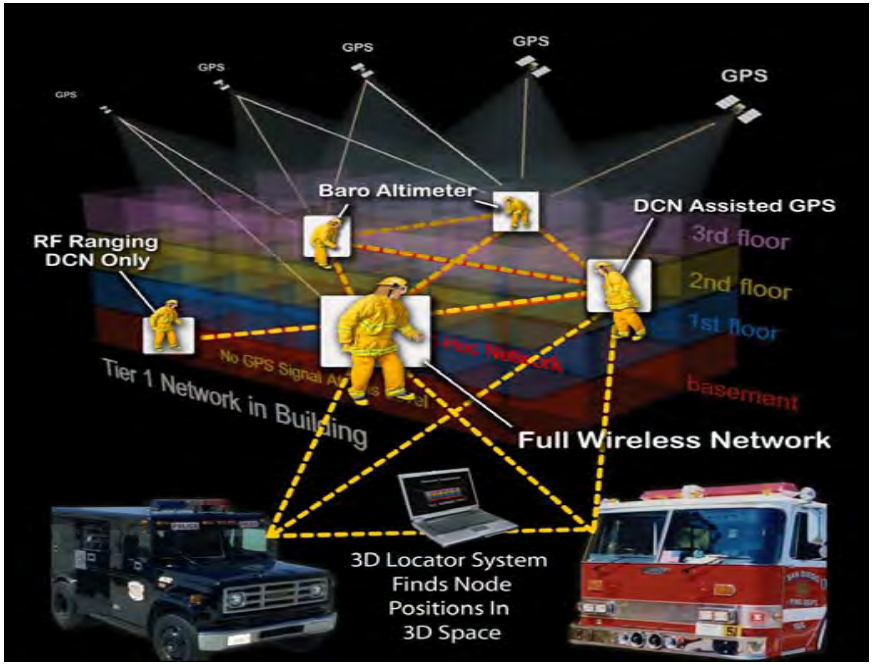
Fusing All Navigation Information Available to the Network



Responder Tracking System

Summary:

- No viable single solution exist
- Best approach is the ***"Cocktail Solution"***
- Current technologies
  - GPS, Radio Frequency Ranging (UWB), Inertial Navigation System (INS), Barometric Altimeter, Wireless Mesh Network and visual display for the incident commander
- Responder wears the unit that transmits location info via a wireless network to the command post



Plan and Schedule:

- Develop Prototype 3D Locator Hardware – FY07
  - Critical Design – FY07
  - Small scale testing – FY07
- Prototype visual imaging and tracking – FY08
- Pilot first responder 3D Locator System in major urban areas across the U.S. – FY08/FY09
- Improve accuracy to under 3m – FY09
- Enhance range and signal penetration in urban environment – FY09/FY10

Homeland Security

Physiological Monitoring System

Product Description:
- Develop an integrated sensor package that will monitor a responder's vital signs
- Develop a baseline for the overall physical health of the responder
- Identify and develop alarms notification metrics

- TRL: 4 – 7

Payoff:
- Provide incident commanders awareness of responder's health through monitoring and notification.
- Know when to pull out the right responders

Customer: FEMA
IPT Supported: IM Preparedness & Response

Planned Activities:
- Program execution plan – FY09
- System requirements and notification metrics – FY09
- Concept development and exploration – FY09
- Brassboard model –FY10; Prototype model – FY10
- Develop engineering model – FY11
- Integration, test, and system demonstration –FY11
- Field test and evaluation – FY12
- Transition system to Authorized Equipment List – FY13

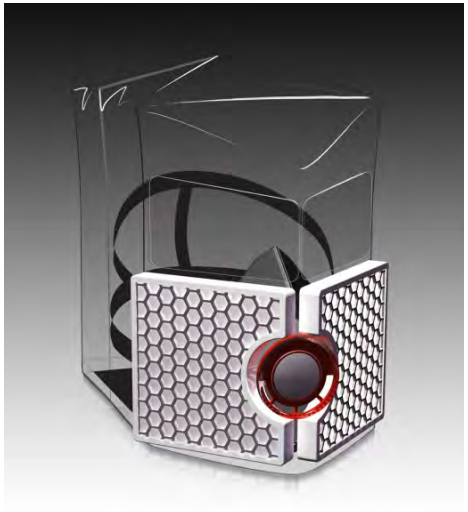
There is a need for a highly reliable metric and notification system for on scene identification of firefighters who are at significant risk of an immediate cardio-vascular or cerebral-vascular incident. By identifying those firefighters in immediate peril, we could prevent fire ground deaths and the attendant risks they present to other firefighters and responders. Such work would be applicable in both CBRN and suppression operational environments.

Technology should be easy to use (lightweight and small), non-invasive, alert both the wearer and command staff monitoring emergency responders warnings of physiological irregularities, able to be integrated with existing personal protective equipment, interoperable with different types of PASS devices, able to be used in all forms of structures, and not cost prohibitive.

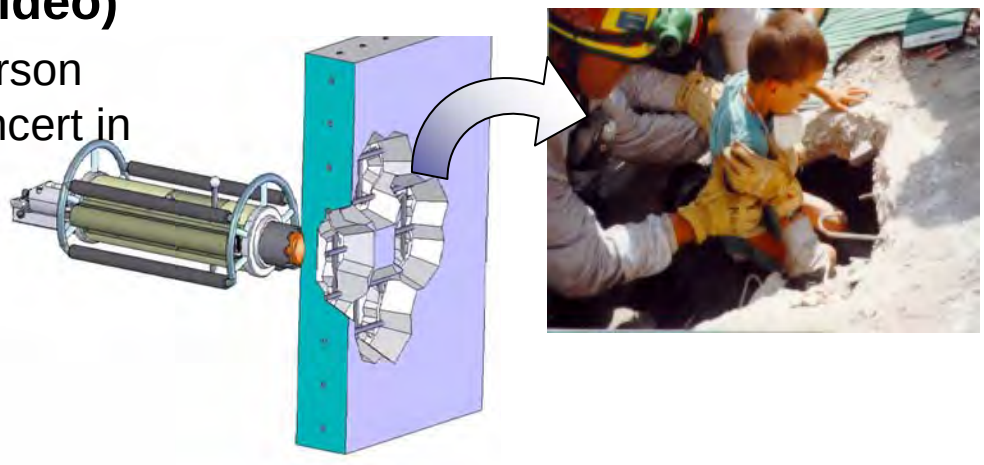
Homeland Security

Emergency Responder Technology

- **Small Innovative Concealable 15min Escape Hood**
  - Advanced lightweight negative pressure emergency escape hood that is capable of providing 15min of protection time during a Chem/Bio/Explosive emergency to the federal/local/state emergency response community.



- **Adv. US&R Breaching Tool (Video)**
  - Using a cartridge-based two person technology to breach heavy concert in less time than current tool



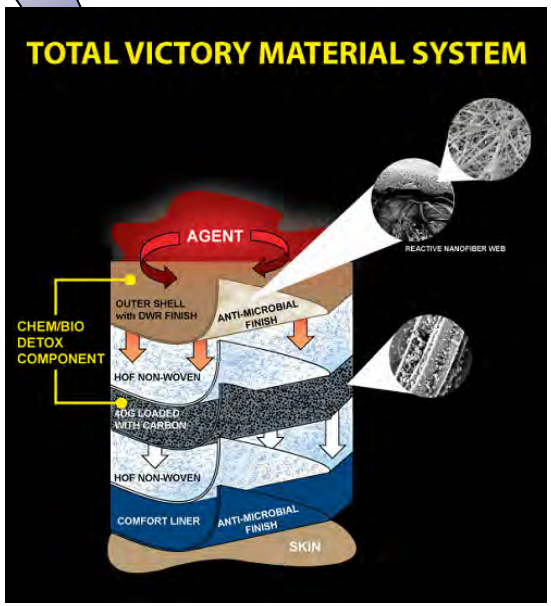
Homeland Security

Incident Management IPT

Emergency Responder Technology

All-Hazards Personal Protective Equipment Prototype Suite

- Develop innovative and revolutionary protective materials and materials systems use by First Responders in all hazardous environments



Homeland Security

Incident Management Enterprise

- Integrated Enterprise for Incident Management Community
  - NIMS & NRP compliant technologies
- Incident Logistics and Resource Tracking
  - Real-time information for mission critical resources
- Simulation Training for Incident Commanders
  - Reproducible scenarios in a virtual training environment
  - Scenario playback and decision analysis for teaching next-generation of incident commanders
- Open Architecture for Incident Information Collaboration
  - Seamless link for incident information across all levels of ICS and MAC
  - Unified operational picture for incident commanders and coordination entities in MAC (EOCs, NOC, etc…)

Future Deployment: *FEMA reference specification for Incident Management Systems to adhere to*
Cross-functional Values: All government and non-government agencies in the NRP

Homeland Security

Homeland Security

Intelligence Led Policing: Enhancing Force Deployment in Law Enforcement and Counter-Terrorism Using Data & Visual Analytics

Joint Project of DHS, the Port Authority of NY and NJ, PNNL, Rutgers University DIMACS, UMD START and Intuidex, Inc.

Presented by William M. Pottenger, Ph.D.

Project Overview

- CompStat NG™ System Goal
  - Marry law enforcement and counter-terrorism initiatives to aid in force deployment
    - Data collection
    - Data analysis
    - Force deployment
- CompStat NG™ System Components
  - Enterprise Architecture (PNNL SRS)
  - Online data collection / entry
  - Data Warehouse
  - On Demand Analysis and Reporting Tools
    - Reports, Charts & Graphs
    - Visual / Data Analytics

System Pilot at the Port Authority Bus Terminal (PABT)

- Phase 0
  - CompStat NG™ operational in semi-automatic mode
- Phase 1
  - CompStat NG™ operational in automatic mode for PABT Pilot
- Phase 2
  - Online data collection / entry and Data Warehouse operational for PABT Pilot
- Phase 3
  - SRS (Scalable Reasoning System) operational for PABT Pilot
  - Visual / data analytics operational in SRS for PABT Pilot

Phase 0: Overview of Tasks Completed

- Data captured from several data sources
  - VAX/VMS Oracle database
  - Local statistics at commands
  - Other facility-wide databases
- Aided in development of Excel-based crime analysis software
- Generated the first PA CompStat NG™ reports

Phase 1: Overview

- Purchase and configure server hardware for data warehouse
- Set up Sequel server and create a database connected to PA / PABT data sources used in CompStat NG™
- Develop web forms for online data collection / entry
- Develop / enhance crime analysis and reporting system
- Document the system and train staff

Phase 1: Online Data Entry

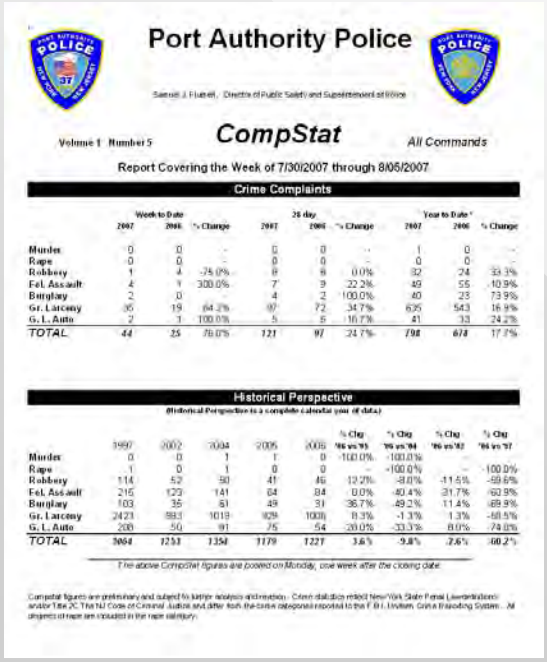
- Copy historical data to the Sequel server and route daily updates to the Sequel database from
  - VAX/VMS CAD / RMS
  - PeopleSoft Payroll System
  - Sick / IOD database
- Develop web data entry forms for use at each facility for online data collection / entry of incident reports on the SQL server
- Develop web forms to store other local information such as
  - Criminal investigations data
  - Summons activity
  - Community Policing Initiatives

Phase 1: Crime Analysis System and Training

- Provide automatic CompStat NG™ Recap Reports
  - Generated on demand from Access/Sequel DBs
- Build on existing CompStat NG™ graphs and charts
  - Link existing chart-generation tools to Access/Sequel DBs
- Provide usage and training documentation; provide training sessions to PANYNJ staff on usage and administration of Crime Analysis System

Phase 1: Recap Reports on Demand

- CompStat NG™ Recap for each facility and job wide
- Includes statistics for seven major crimes, targeted crimes, and/or quality of life issues



Port Authority Police

Volume 1 Number 5 **CompStat** All Commands

Report Covering the Week of 7/30/2007 through 8/05/2007

Crime Complaints

	Week to Date			28 day			Year to Date		
	2007	2006	% Change	2007	2006	% Change	2007	2006	% Change
Murder	0	0	-	0	0	-	1	0	-
Rape	0	0	-	0	0	-	0	0	-
Robbery	1	4	-75.0%	8	8	0.0%	32	24	33.3%
Fel. Assault	4	1	300.0%	7	9	-22.2%	49	55	-10.9%
Burglary	2	0	-	4	2	100.0%	40	23	73.9%
Gr. Larceny	35	19	84.2%	97	72	34.7%	635	543	16.9%
G. L. Auto	2	1	100.0%	5	6	-16.7%	41	33	24.2%
TOTAL	44	25	76.0%	121	97	24.7%	798	678	17.7%

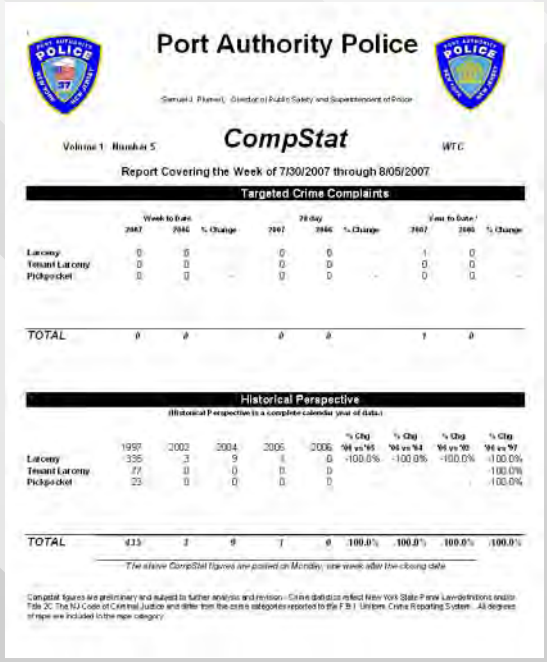
Historical Perspective

(Historical Perspective is a complete calendar year of data.)

	1997	2002	2004	2005	2006	% Chg '06 vs '05	% Chg '06 vs '04	% Chg '06 vs '02	% Chg '06 vs '97
Murder	0	0	1	1	0	-100.0%	-100.0%	-	-100.0%
Rape	1	0	1	0	0	-	-100.0%	-	-100.0%
Robbery	114	52	50	41	46	12.2%	-8.0%	-11.5%	-59.6%
Fel. Assault	215	120	141	84	84	0.0%	-40.4%	-31.7%	-60.9%
Burglary	103	35	61	49	31	-36.7%	-49.2%	-11.4%	-69.9%
Gr. Larceny	2423	993	1019	629	1008	60.3%	-1.3%	1.3%	-58.5%
G. L. Auto	208	50	91	75	54	-28.0%	-33.3%	8.0%	-74.0%
TOTAL	3064	1250	1350	1179	1221	3.6%	-9.6%	-2.6%	-60.2%

The above CompStat figures are posted on Monday, one week after the closing date.

Compstat figures are preliminary and subject to further analysis and revision. Crime statistics reflect New York State Penal Law definitions and/or Title 2C The NJ Code of Criminal Justice and differ from the crime categories reported to the F.B.I. Uniform Crime Reporting System. All degrees of rape are included in the rape category.



Port Authority Police

Volume 1 Number 5 **CompStat** WTC

Report Covering the Week of 7/30/2007 through 8/05/2007

Targeted Crime Complaints

	Week to Date			28 day			Year to Date		
	2007	2006	% Change	2007	2006	% Change	2007	2006	% Change
Larceny	0	0		0	0		1	0	
Tenant Larceny	0	0		0	0		0	0	
Pickpocket	0	0	-	0	0	-	0	0	-
TOTAL	0	0		0	0		1	0	

Historical Perspective

(Historical Perspective is a complete calendar year of data.)

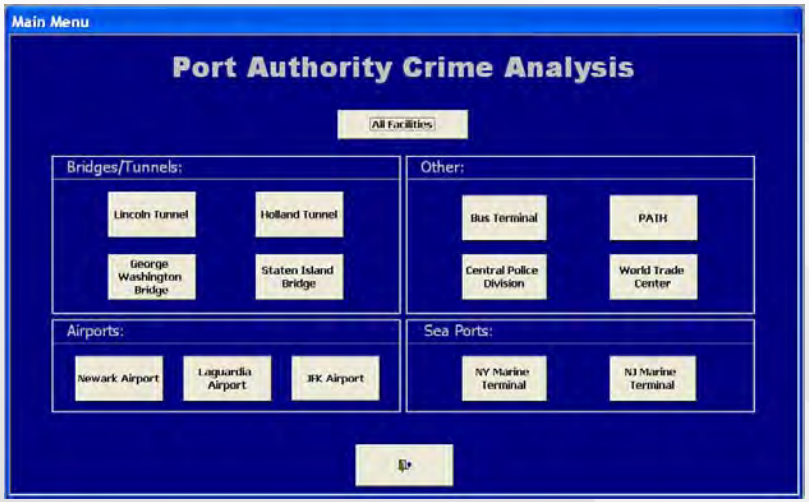
	1997	2002	2004	2005	2006	% Chg '06 vs '05	% Chg '06 vs '04	% Chg '06 vs '02	% Chg '06 vs '97
Larceny	335	3	9	1	0	-100.0%	-100.0%	-100.0%	-100.0%
Tenant Larceny	77	0	0	0	0				-100.0%
Pickpocket	23	0	0	0	0				-100.0%
TOTAL	435	3	9	1	0	-100.0%	-100.0%	-100.0%	-100.0%

The above CompStat figures are posted on Monday, one week after the closing date.

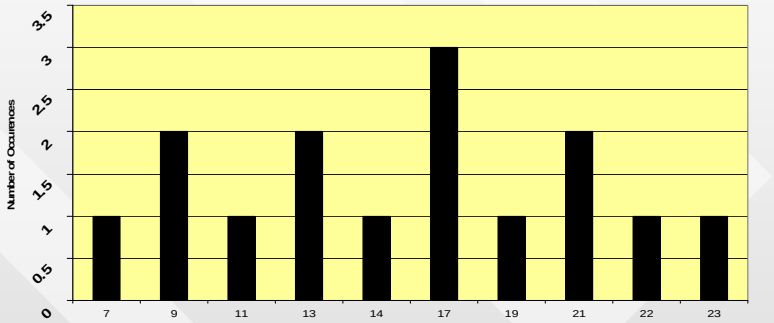
Compstat figures are preliminary and subject to further analysis and revision. Crime statistics reflect New York State Penal Law definitions and/or Title 2C The NJ Code of Criminal Justice and differ from the crime categories reported to the F.B.I. Uniform Crime Reporting System. All degrees of rape are included in the rape category.

Phase 1: Crime Analysis Software

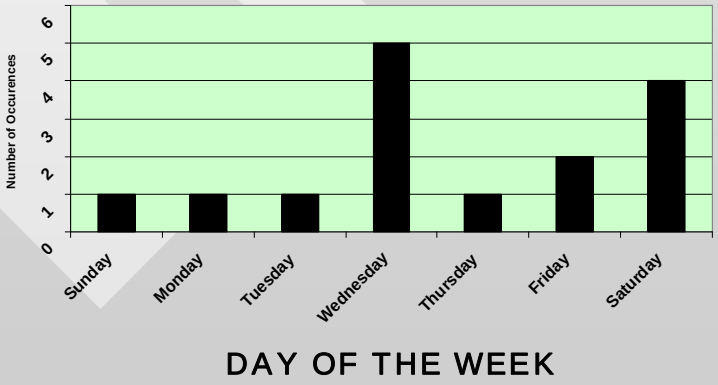
Sorts crime statistics by date, location, time of day, and day of week



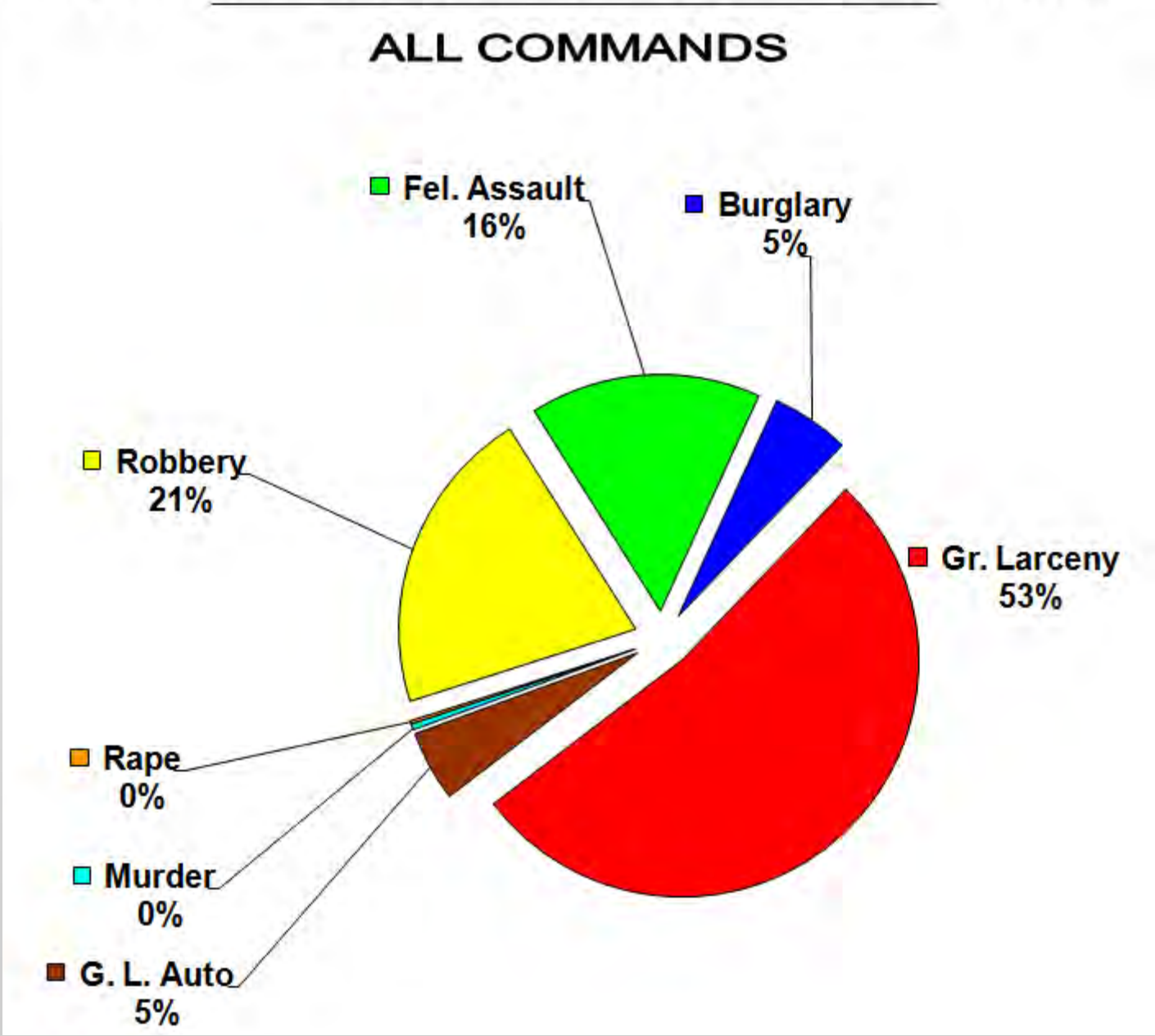
PABT Robbery by Hour (1/01/07 -7/24/07 YTD)



PABT Robbery by Day (1/01/07 -7/24/07 YTD)

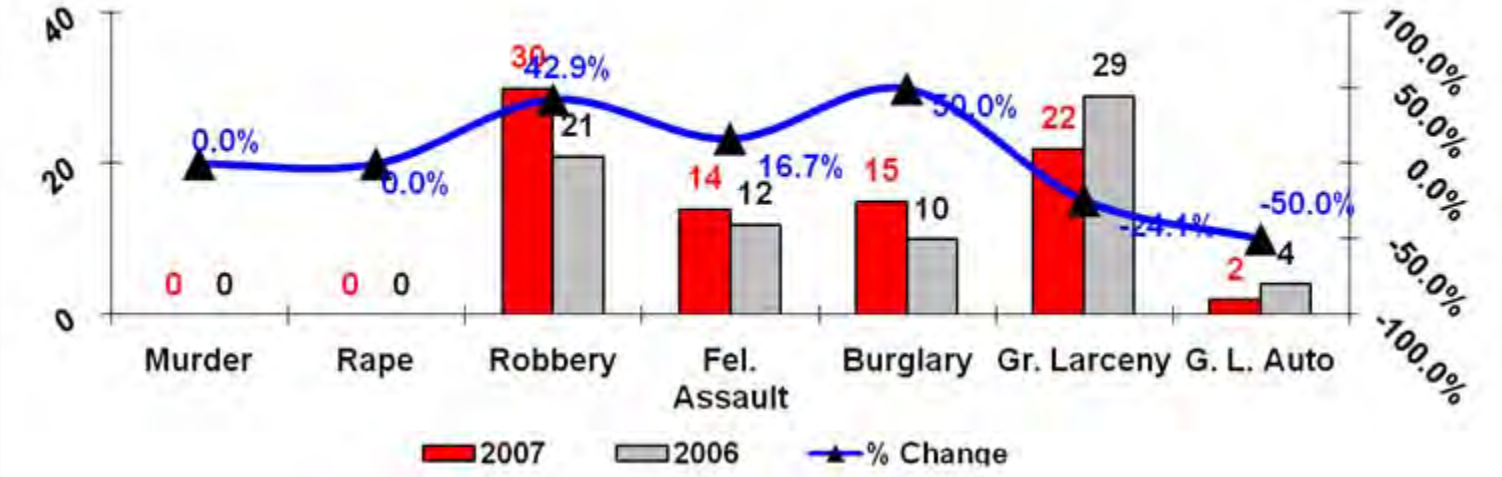


OVERALL MAJOR CRIME ACTIVITY BY PERCENTAGE



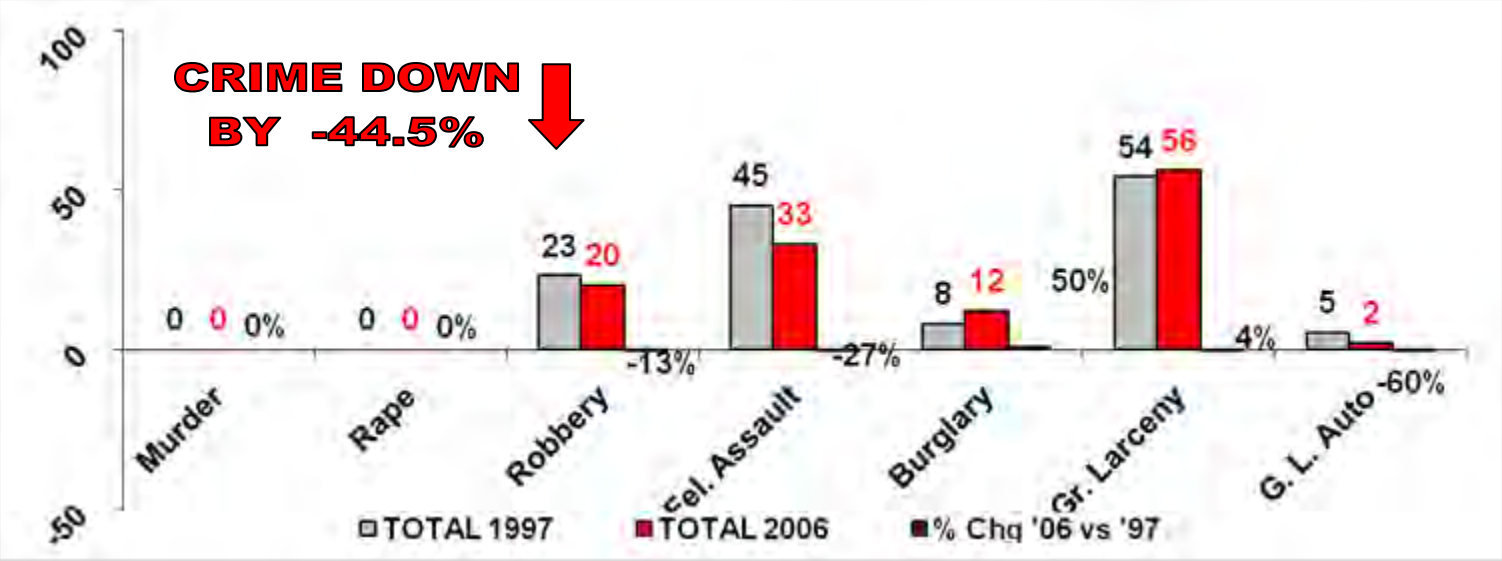
PA BUS TERMINAL - 7 MAJOR CRIMES

2006 vs. 2007

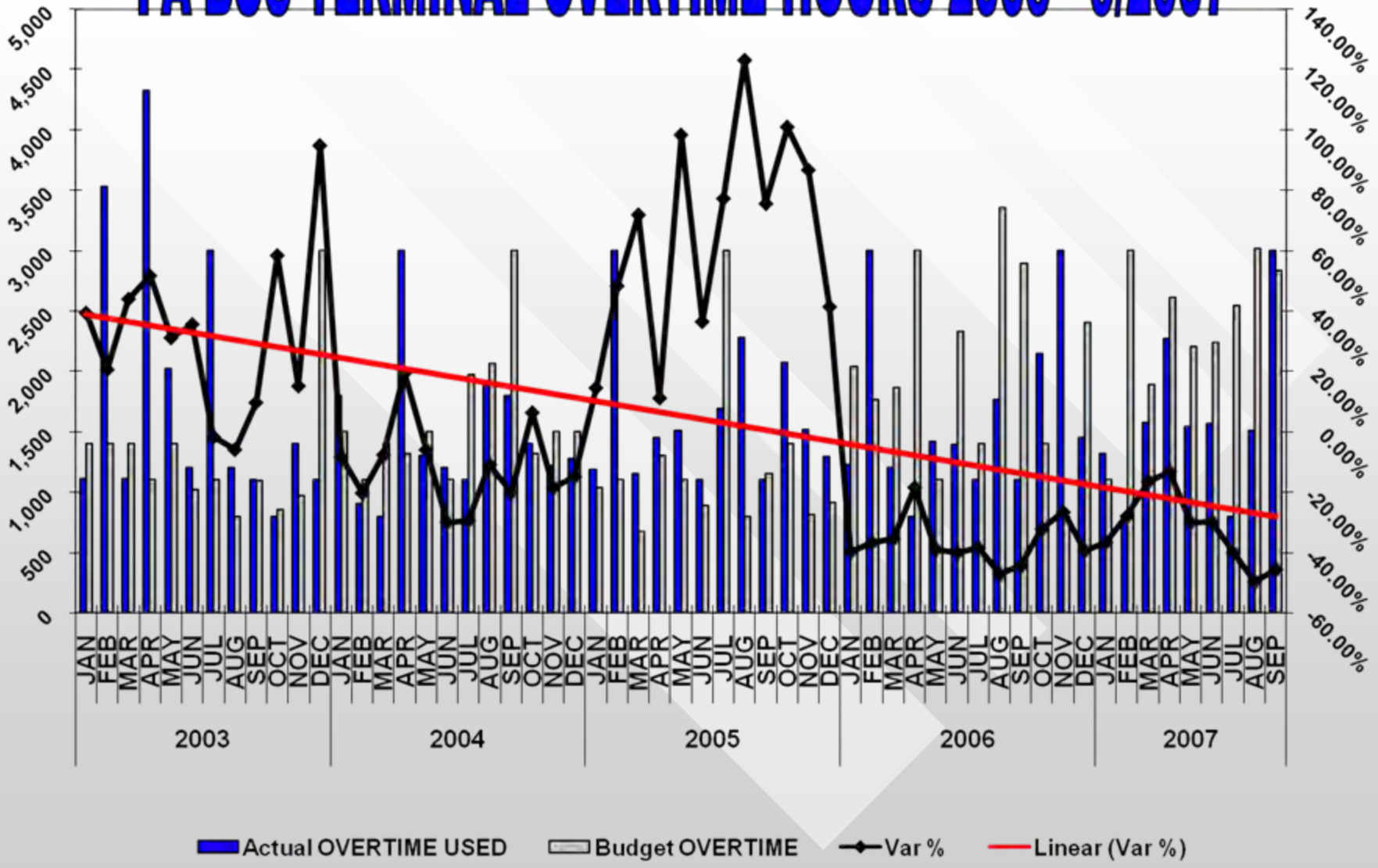


PA BUS TERMINAL - 7 MAJOR CRIMES

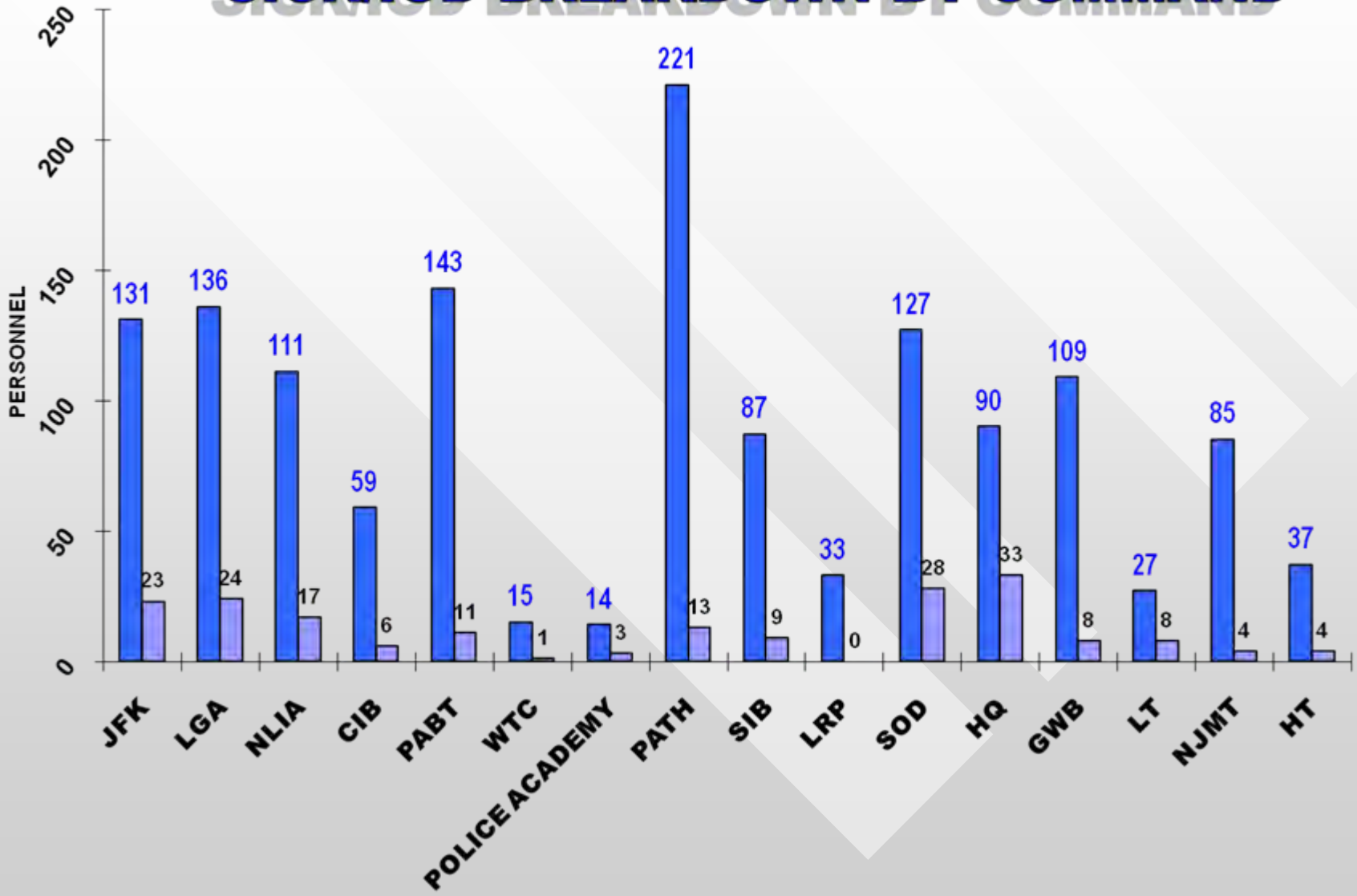
1997 vs. 2006



PA BUS TERMINAL OVERTIME HOURS 2003 - 9/2007



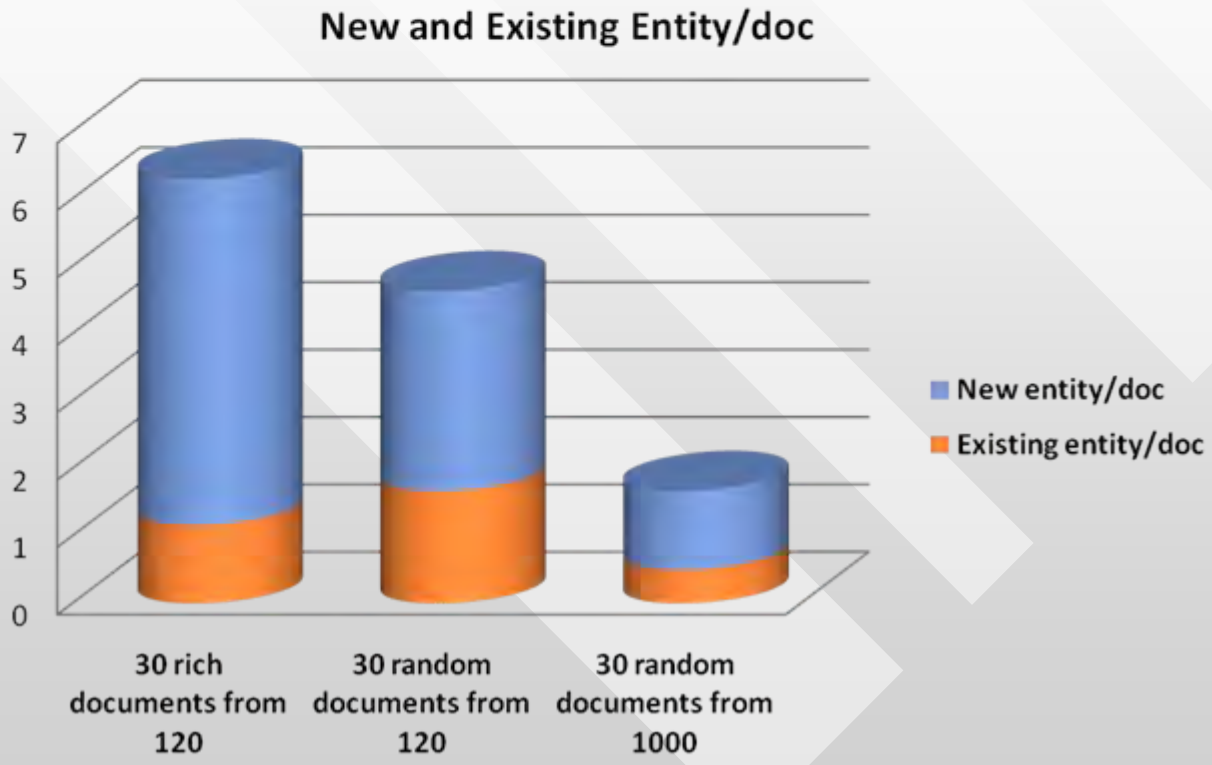
ABSENCE CONTROL UNIT
SICK/IOD BREAKDOWN BY COMMAND



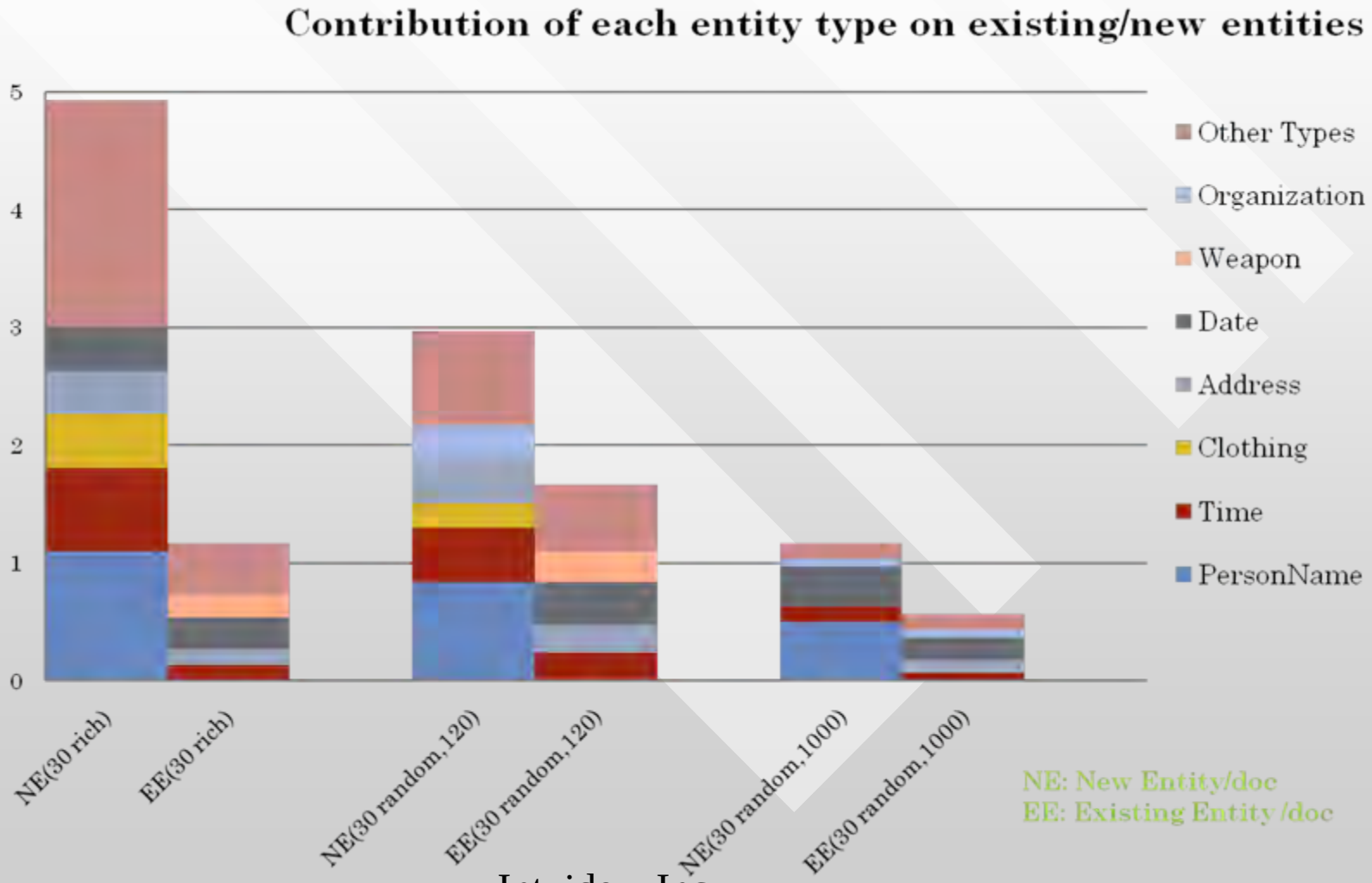
Phase 2: Data Warehouse

- Incorporate information and support real-time updating from
  - Global Terrorism Database @ START
  - CompStat NG™ Access/Sequel DBs
  - Other potential data sources
    - Weather data: daily/hourly reports from weather stations of the three major airports
    - Traffic data: from PA traffic engineering
- Integrate the multiple sources of information
- Integrate information extraction capability from police incident data and GTD

Phase 2: Information Extraction From Unstructured Data



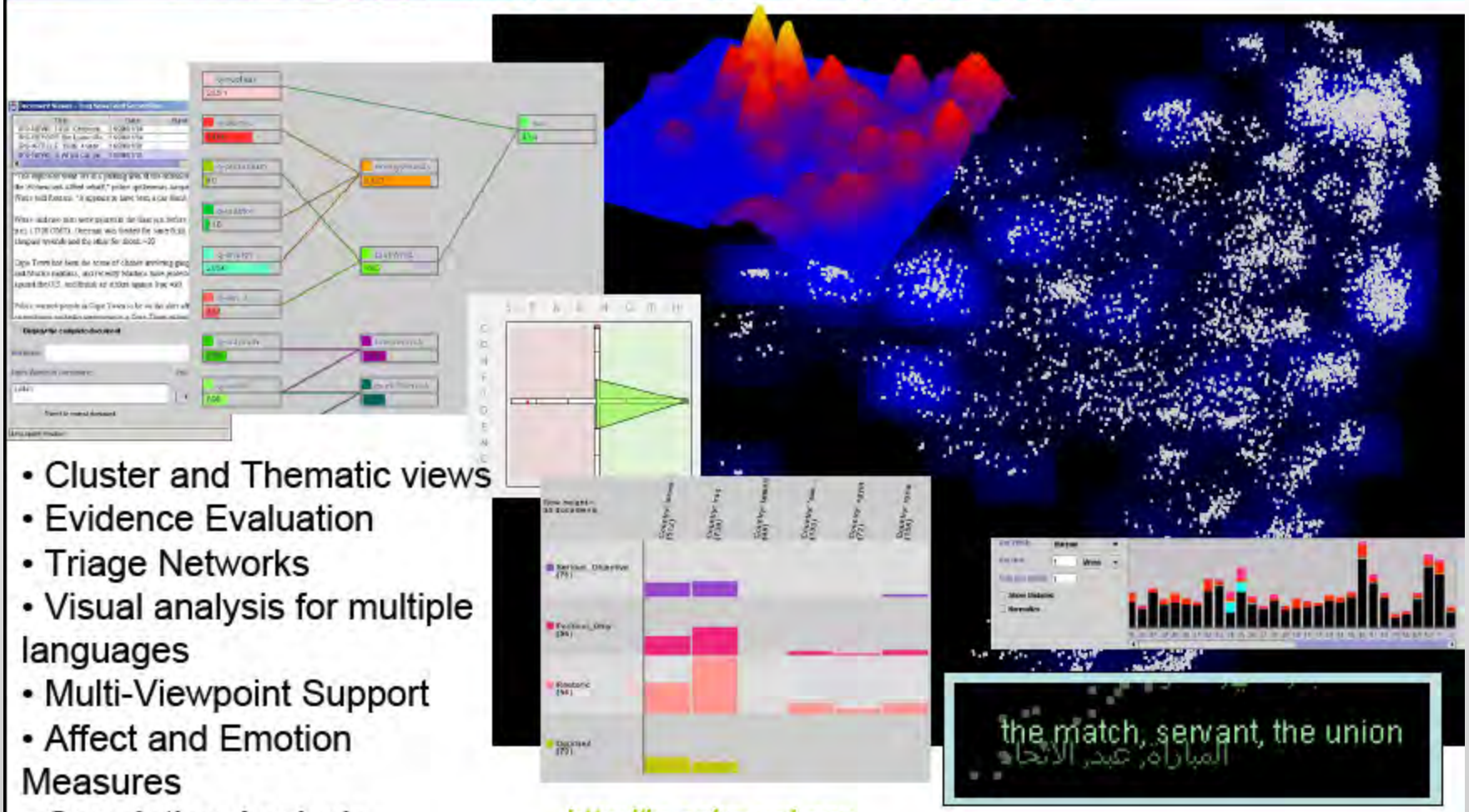
Phase 2: Information Extraction From Unstructured Data



Phase 3: Visual Analytics

- Overarching goal is to *reduce relative risk*
- Specify visualization tools and potential integration
  - PNNL In-Spire
  - PNNL Scalable Reasoning System (SRS)
- Deploy Assessment Wall
- Verify appropriate security, functionality, and connectivity with the data warehouse
- Provide usage and training documentation; provide training sessions to PANYNJ staff on usage and administration of visual analytics system

IN-SPIRE: Advanced Text Analysis Platform



- Cluster and Thematic views
- Evidence Evaluation
- Triage Networks
- Visual analysis for multiple languages
- Multi-Viewpoint Support
- Affect and Emotion Measures
- Correlation Analysis
- Streaming Data

http://in-spire.pnl.gov

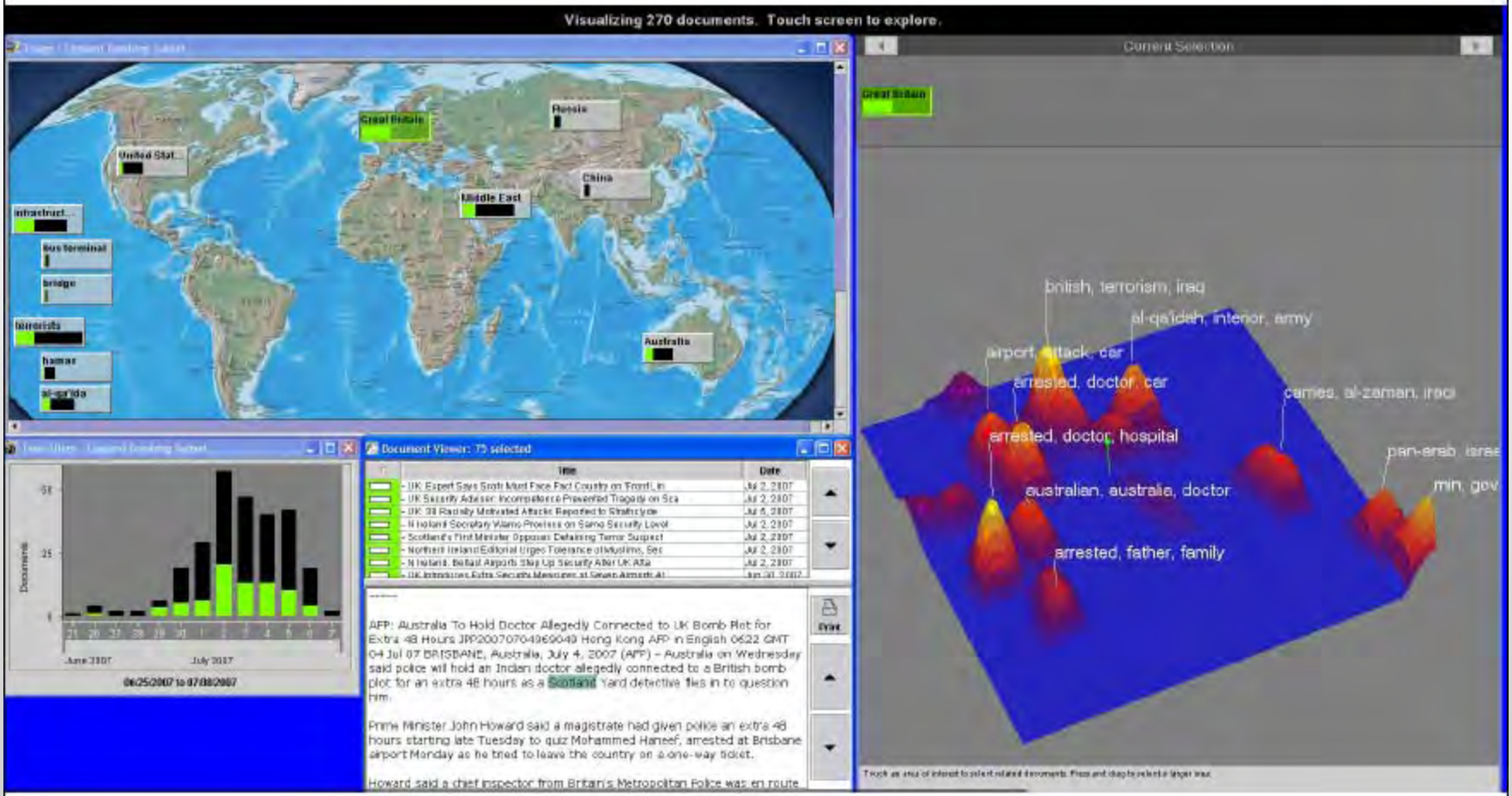
The Assessment Wall

Developed an interactive information visualization system that provides an up-to-date overview and helps users intuitively find documents of interest on a large touch display.

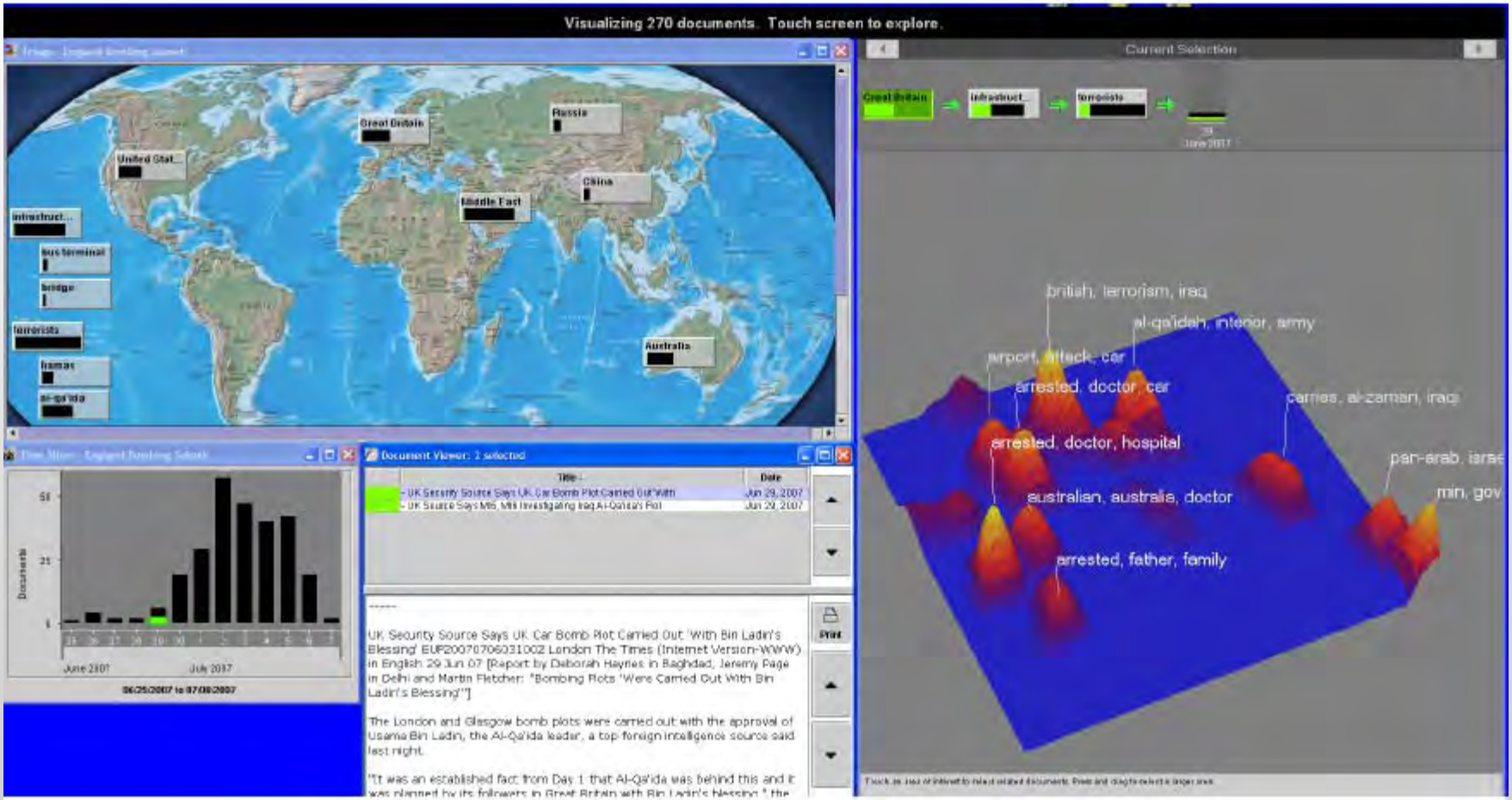
- **A walk-up usable interface that provide anyone instant analytical capability.**
- **Designed for team collaboration and discussion of analytical tasks.**
- **Simple interface design to provide rapid analytical results is ideal for command room style utility.**

Partnership Funding

The Assessment Wall



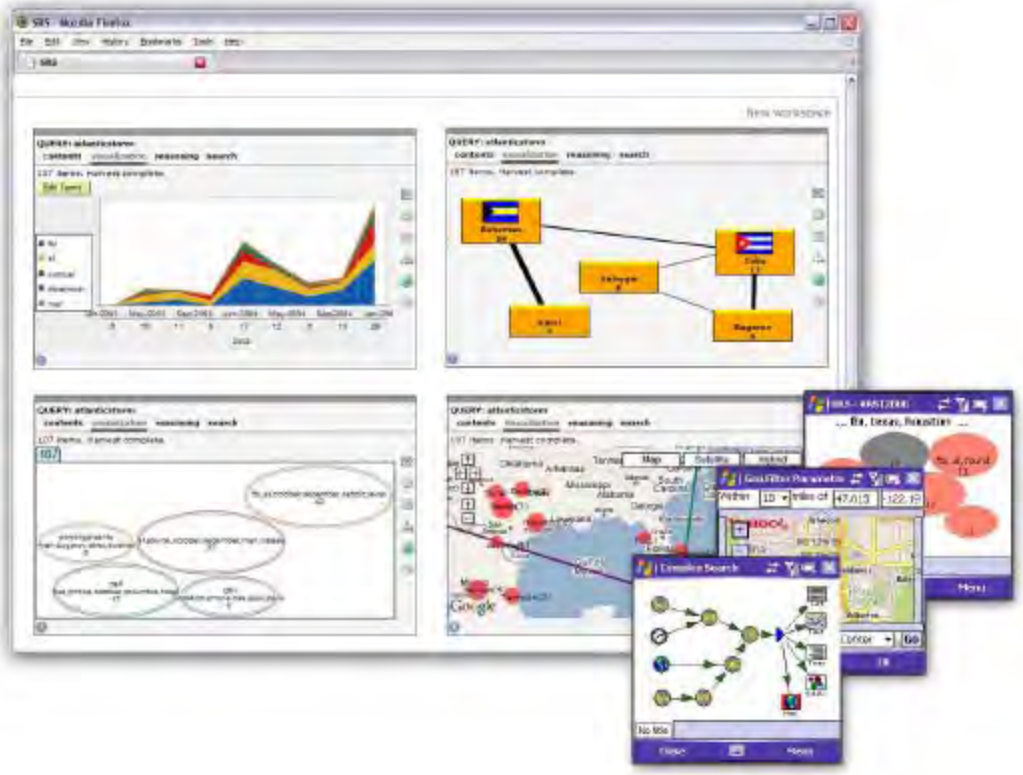
The Assessment Wall



Scalable Reasoning System

AIM

Develop a thin-client platform for integrating diverse visual analytic applications in an approachable interface for knowledge discovery.

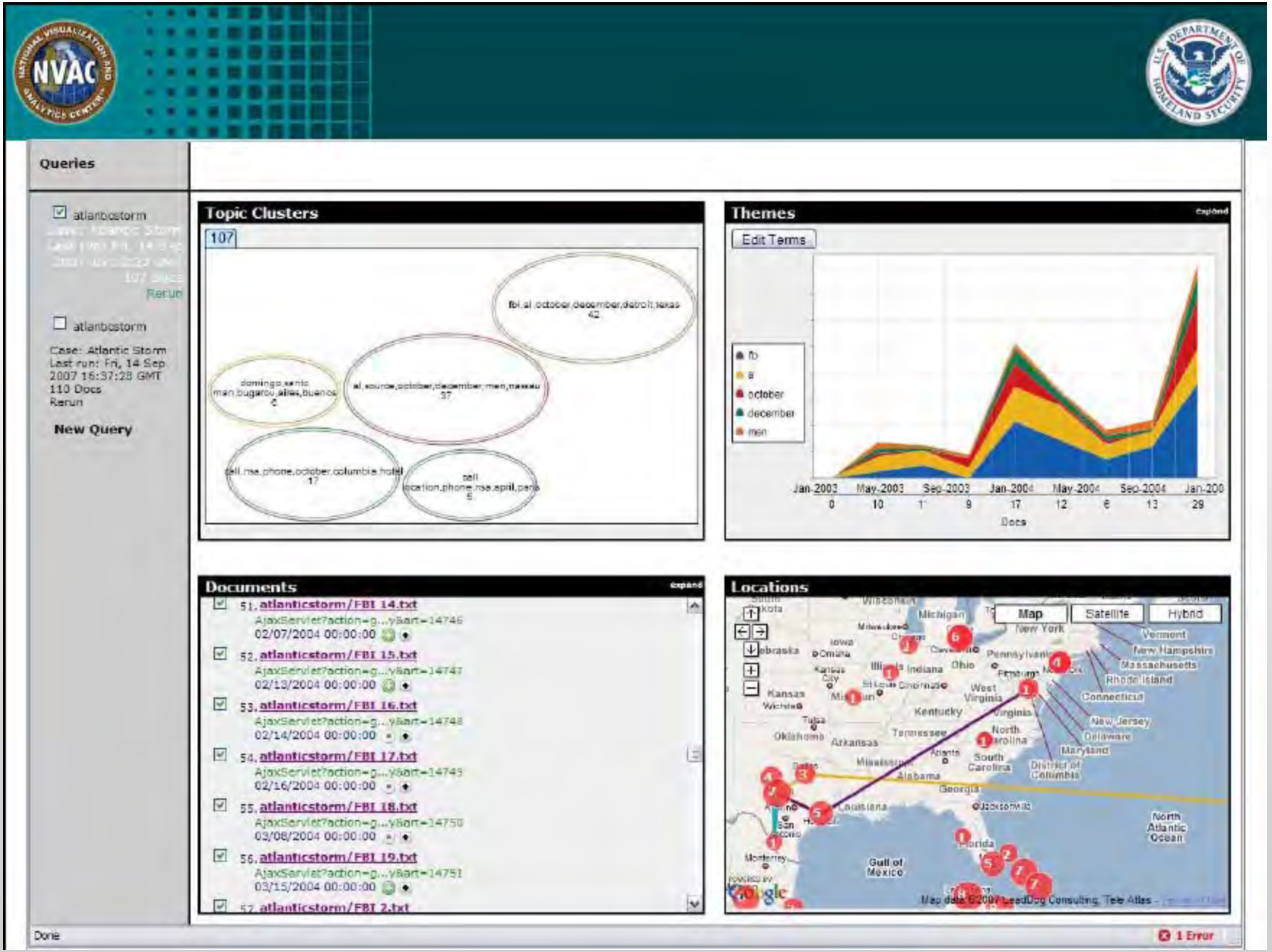


Scalable Reasoning System

IMPACTS

- Users can easily discover topical, temporal, and geographic patterns in their data.
- Customers can easily integrate visualization into their existing web portals.
- Real-time information sharing builds situation awareness.

ARJIS


Queries
atlanbostorm
Rerun
atlanbostorm
Case: Atlantic Storm
Last run: Fri, 14 Sep 2007 16:37:28 GMT
110 Docs
Rerun
New Query
Topic Clusters
107
fbi,al,october,december,detroit,texas
42
domingo,santo
man,bugarou,allies,buenos
6
al,source,october,december,men,nassau
37
bell,nsa,phone,october,columbia,hotel
17
bell
location,phone,nsa,april,paris
5
Themes
expand
Edit Terms
fb
a
october
december
men
Jan-2003
May-2003
Sep-2003
Jan-2004
May-2004
Sep-2004
Jan-200
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10
9
17
12
6
13
29
Docs
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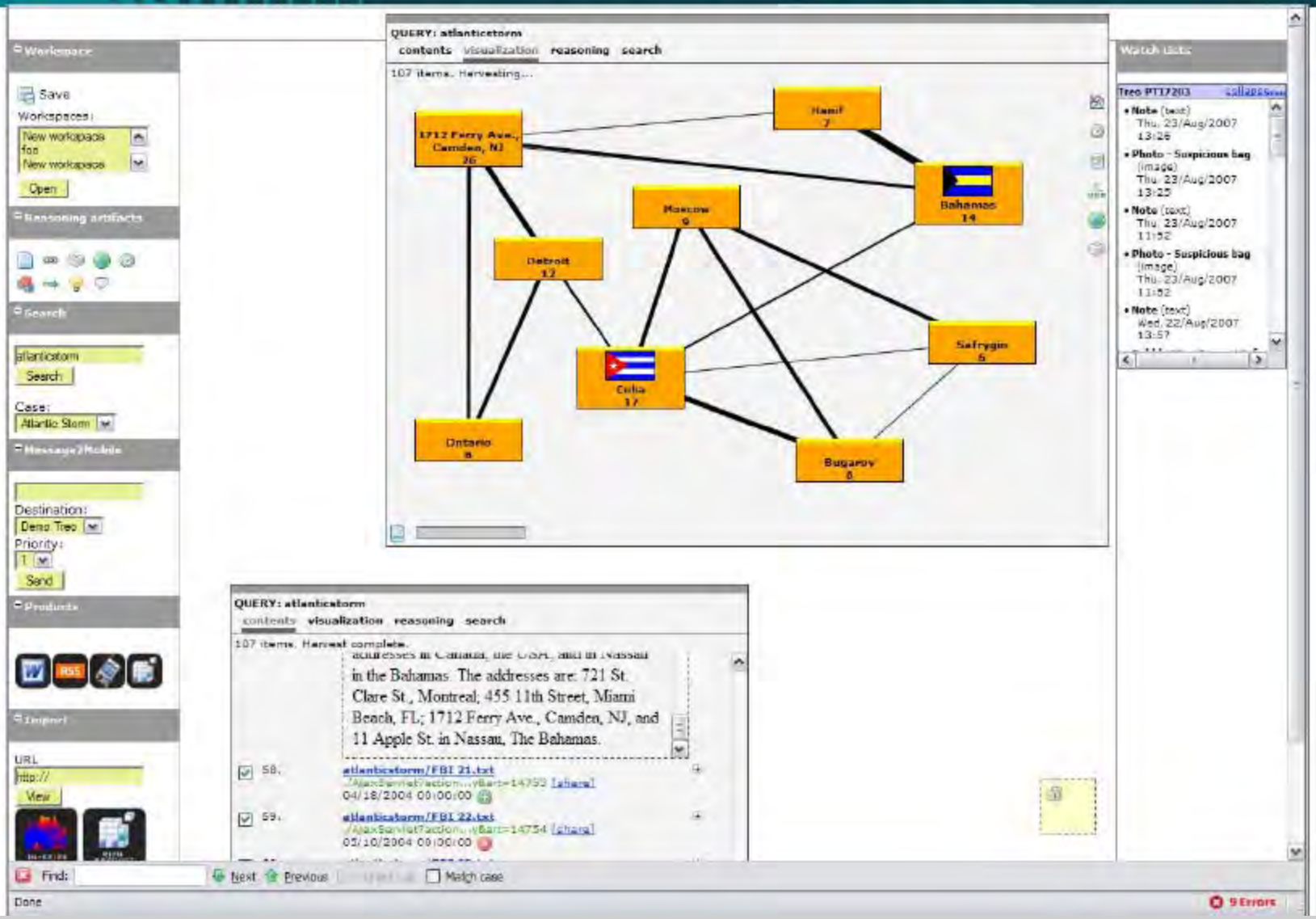
Locations
Map
Satellite
Hybrid
Michigan
New York
Vermont
New Hampshire
Massachusetts
Rhode Island
Connecticut
New Jersey
Delaware
Maryland
District of Columbia
Pennsylvania
Ohio
Indiana
Illinois
Iowa
Omaha
Kansas City
St Louis
Cincinnati
West Virginia
Virginia
Kentucky
Tennessee
North Carolina
South Carolina
Arkansas
Oklahoma
Tulsa
Wichita
Kansas
Nebraska
Dallas
Atlanta
Alabama
Mississippi
Georgia
Louisiana
Jacksonville
Florida
Monterrey
Gulf of Mexico
North Atlantic Ocean
Map data ©2007 LeadDog Consulting, Tele Atlas
Done
1 Error

Scalable Reasoning System



Conclusion

CompStat NG™ Supports

- CompStat Crime Analysis
  - Charts, graphs and reports for managing force deployment in counter-terrorism and the fight against crime
- Data Warehouse
  - Leverage underutilized everyday data through automatic information gathering /extraction and intelligence generation
  - Discover trends that aid in counter-terrorism and crime prevention efforts
  - Support suspect identification
- Visual / Data Analytics
  - Mine valuable links between people, places and things
  - Enable command staff to quickly visualize crime and other trends

Executive Director Tony Shorris' Goal: A "*national model*" for counter-terrorism and crime prevention and analysis!

Lawrence Livermore National Laboratory

Use of Modeling & Simulation in the CA Golden Guardian Exercise

January 15, 2008

Michael Mercer

mercer2@llnl.gov

Lawrence Livermore National Laboratory, P. O. Box 808, Livermore, CA 94551

This work performed under the auspices of the U.S. Department of Energy by Lawrence Livermore National Laboratory under Contract DE-AC52-07NA27344

LLNL-PRES-400427

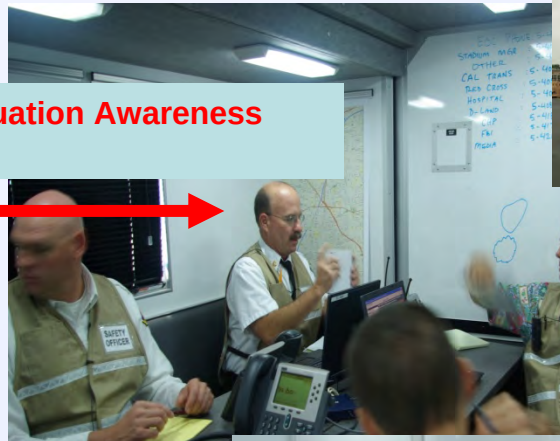
The Training Exercise and Lessons Learned (TELL) program uses simulation and technology

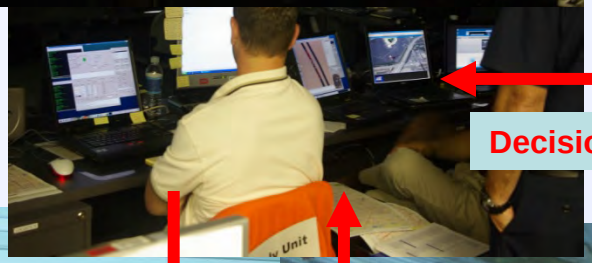
- TELL is a DHS S&T sponsored program defining a framework to utilize simulations and technologies to drive training for large multi-jurisdictional responses
- The TELL prototype system is being used to experiment with this framework to drive training and exercises
- Anaheim PrepEx – The TELL system was used in a exercise that trained Incident Command Teams for the CA Golden Guardian exercise

The TELL system provided ground truth to trainees at the Anaheim Golden Guardian Preparation Exercise

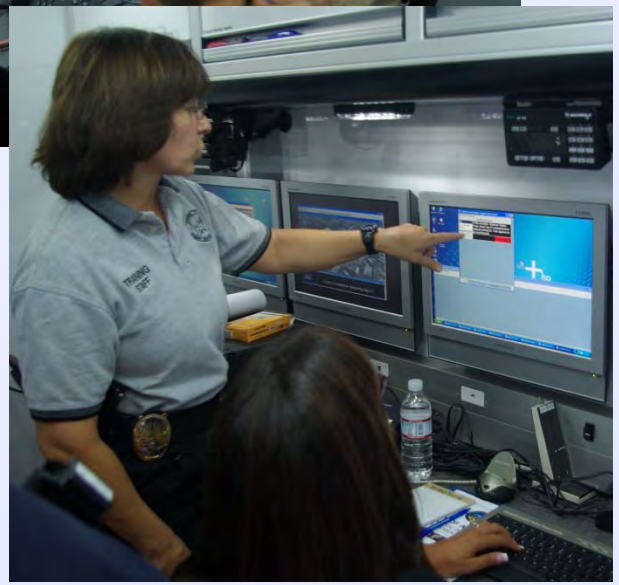
TELL System

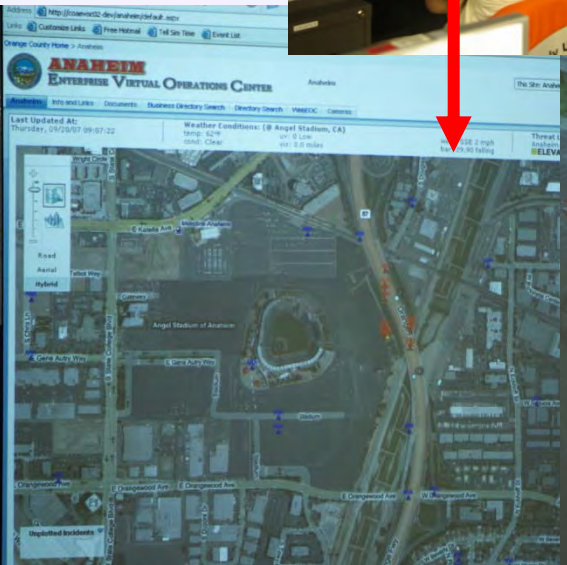
Ground Truth Situation Awareness Consequences

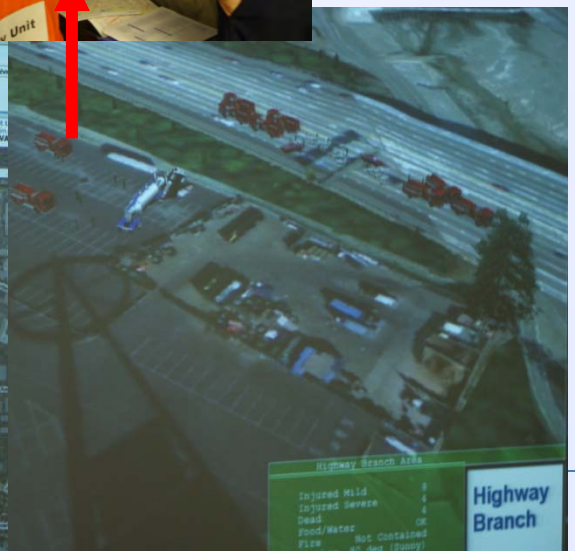




Decisions







The TELL system provides an immersive training experience

- Realistic
  - Ground truth
  - Operational tools
- Consequences to decisions
  - Simulations are physics based
    - Responder resources behave true-to-life
    - Chemical plumes disperse true-to-life
  - Decisions affect outcomes
- Metrics
  - All decisions and events are captured
  - Compare outcomes to all possible outcomes

Realistic activity in the Incident Command Post

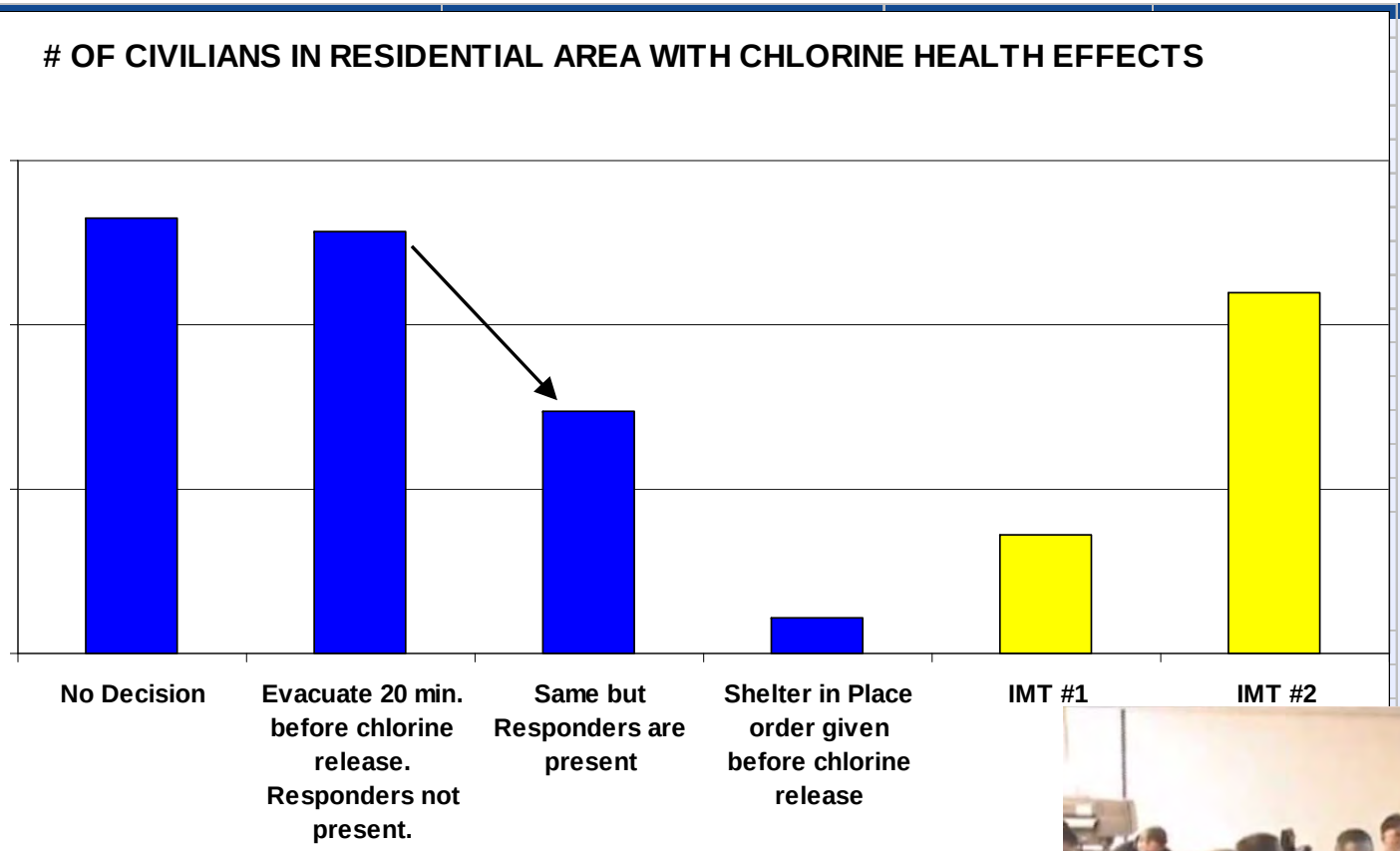
- Operations Chief gets situation Brief from Highway 57 branch on-scene commander

- Perimeter established around Highway 57 branch

- Incident Command Team receives report of second explosion

Consequences to explosion and chemical release video

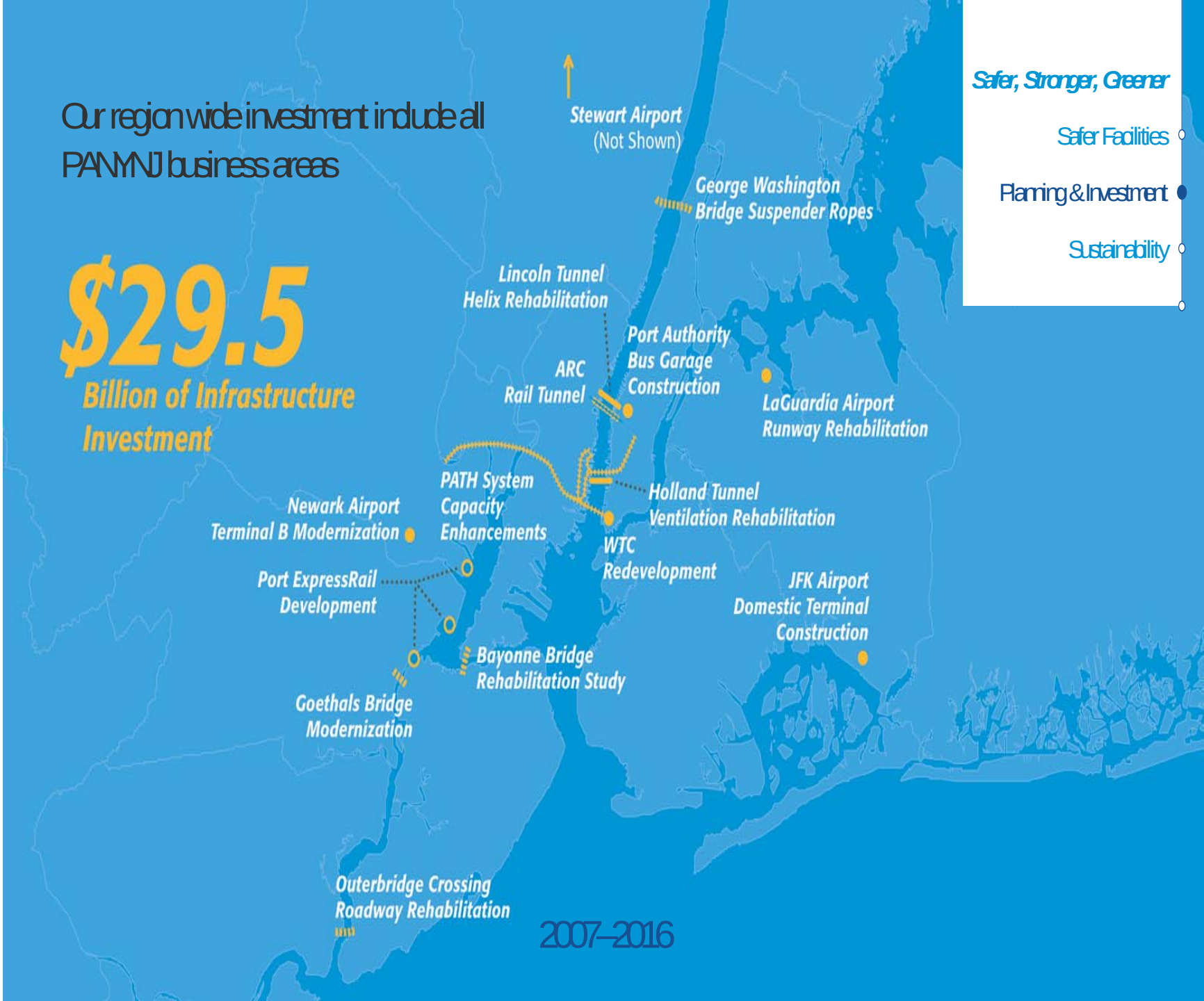
Metrics ready immediately to provide a rich hotwash



Contact information

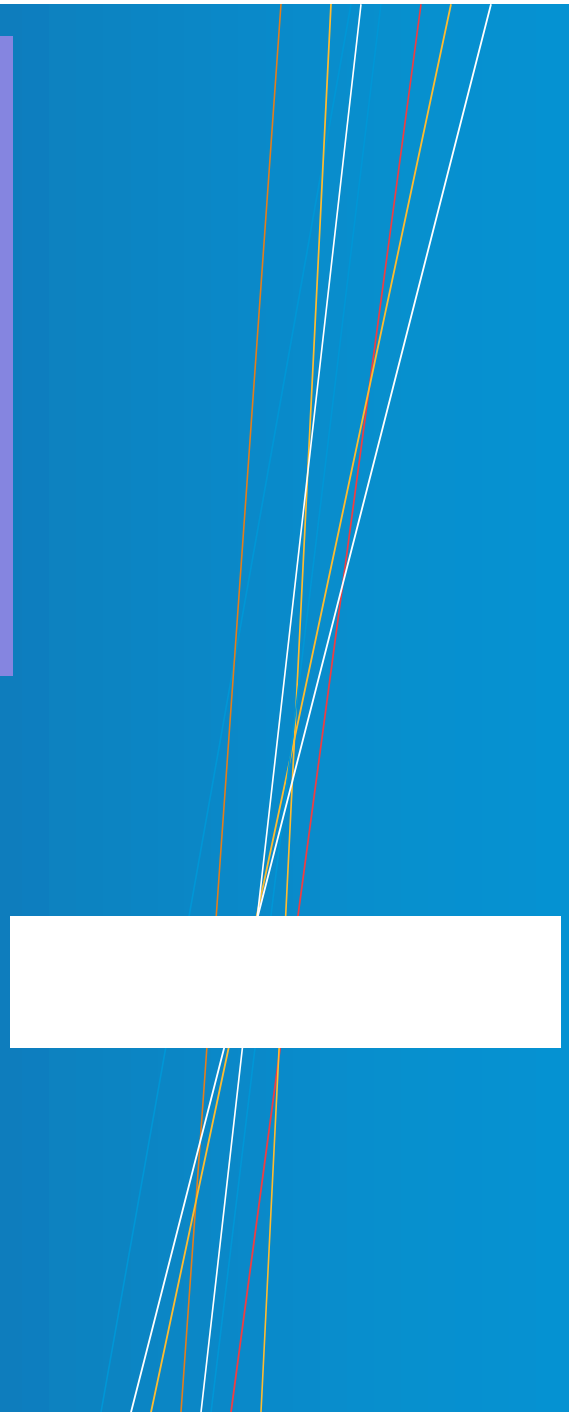
- Michael Mercer
  - mercer2@llnl.gov
  - 925-422-8574
- In LLNL booth (#428) Wednesday

THE PORT AUTHORITY
OF NY & NJ


Our region wide investment include all PANYNJ business areas
$29.5
Billion of Infrastructure Investment
Stewart Airport
(Not Shown)
George Washington Bridge Suspender Ropes
Lincoln Tunnel Helix Rehabilitation
Port Authority Bus Garage Construction
ARC Rail Tunnel
LaGuardia Airport Runway Rehabilitation
PATH System Capacity Enhancements
Holland Tunnel Ventilation Rehabilitation
Newark Airport Terminal B Modernization
WTC Redevelopment
Port ExpressRail Development
JFK Airport Domestic Terminal Construction
Bayonne Bridge Rehabilitation Study
Goethals Bridge Modernization
Outerbridge Crossing Roadway Rehabilitation
2007–2016
Safer, Stronger, Greener
Safer Facilities
Planning & Investment
Sustainability

Computer Statistical Analysis
COMPSTAT

- NYPD 1990's
- Personnel Management
- Personnel Accountability

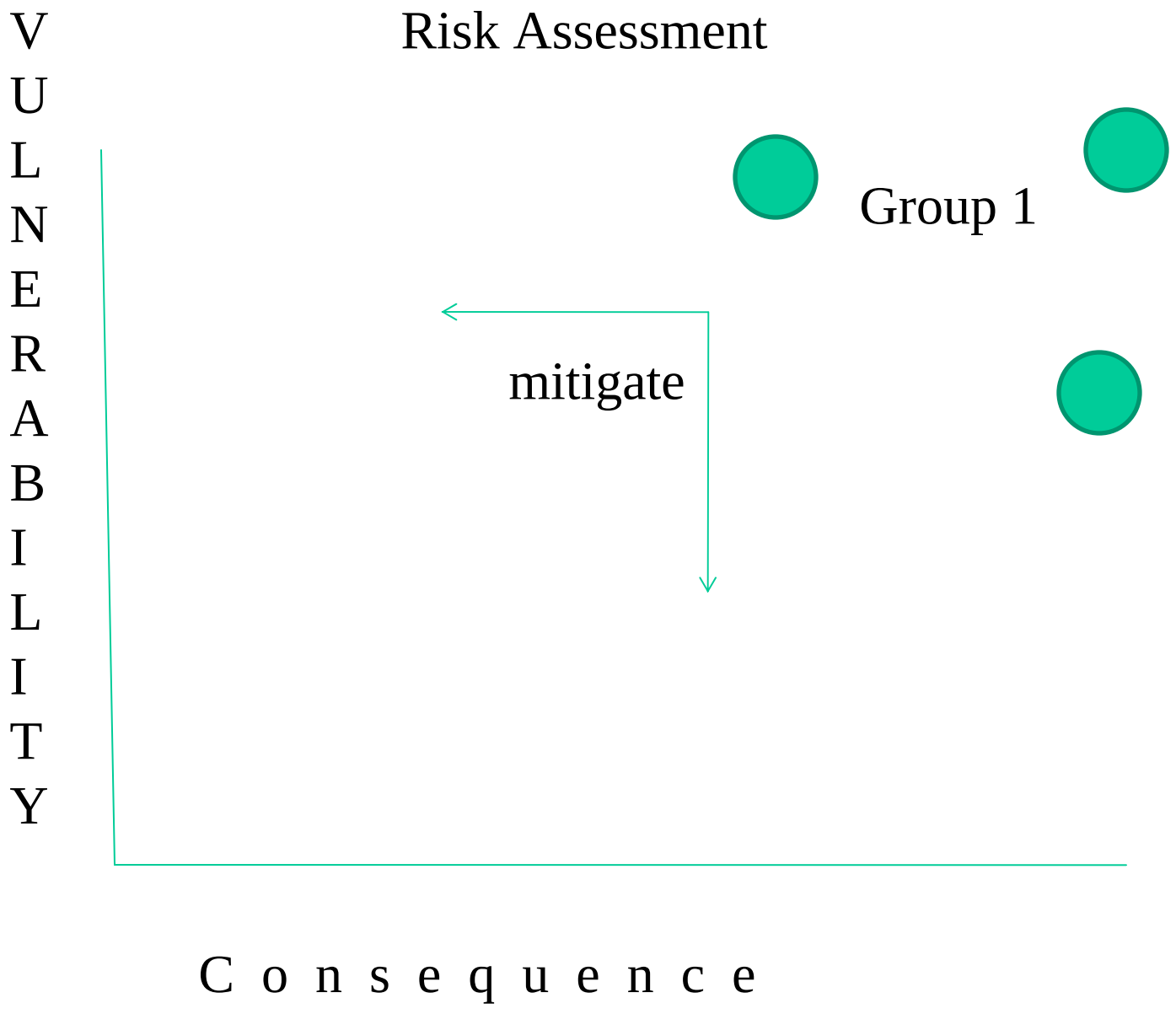


Computer Statistical Analysis
COMPSTAT

- NYPD 1990's
- Personnel Management
- Personnel Accountability

Compstat Next Generation

- Intelligence led policing
- Force Deployment
- Counter-terrorism


Risk Assessment
VULNERABILITY
Group 1
mitigate
Consequence

Critical Infrastructure Inspection Management System (CIIMS)

Moderator - Mr. Herb Engle, DHS S&T

Command, Control and Interoperability

Vision

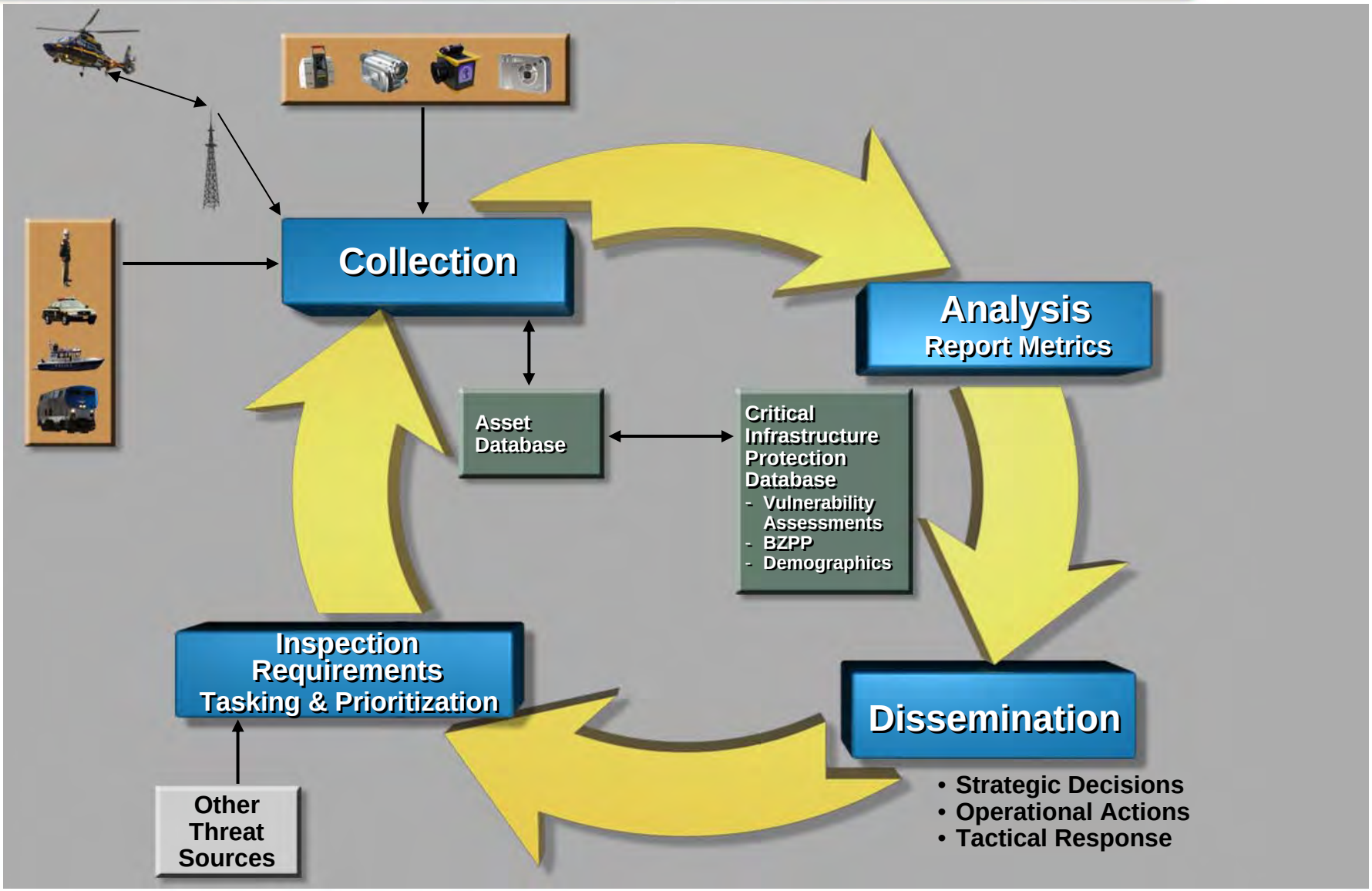
Stakeholders have comprehensive, real-time, and relevant information to create and maintain a secure and safe Nation.

Customers

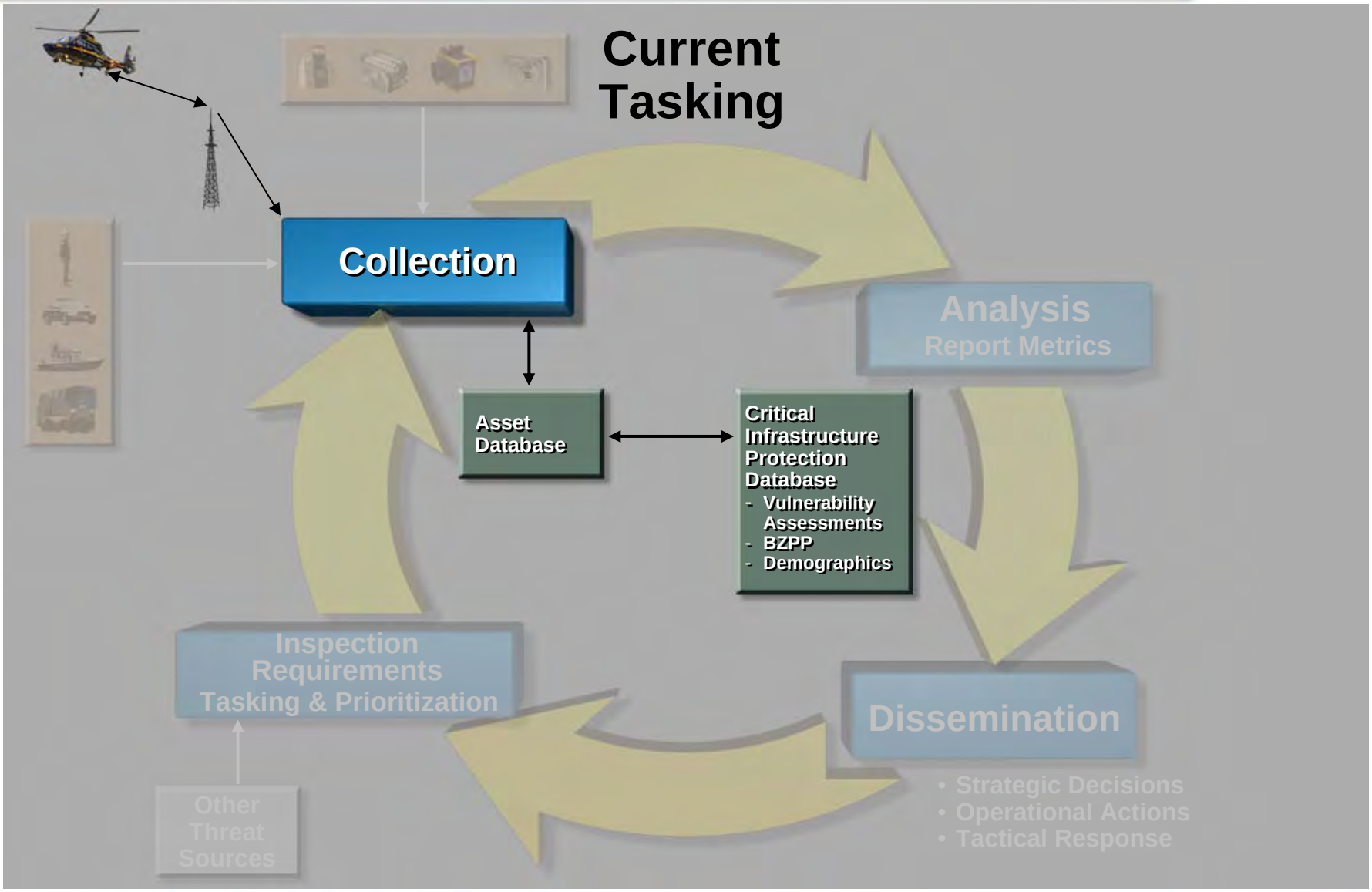
Local, tribal, state, and Federal emergency responders that plan for, detect, and respond to all hazards, as well as private sector partners that own, operate, and maintain the Nation's cyber infrastructure

Maryland State Police

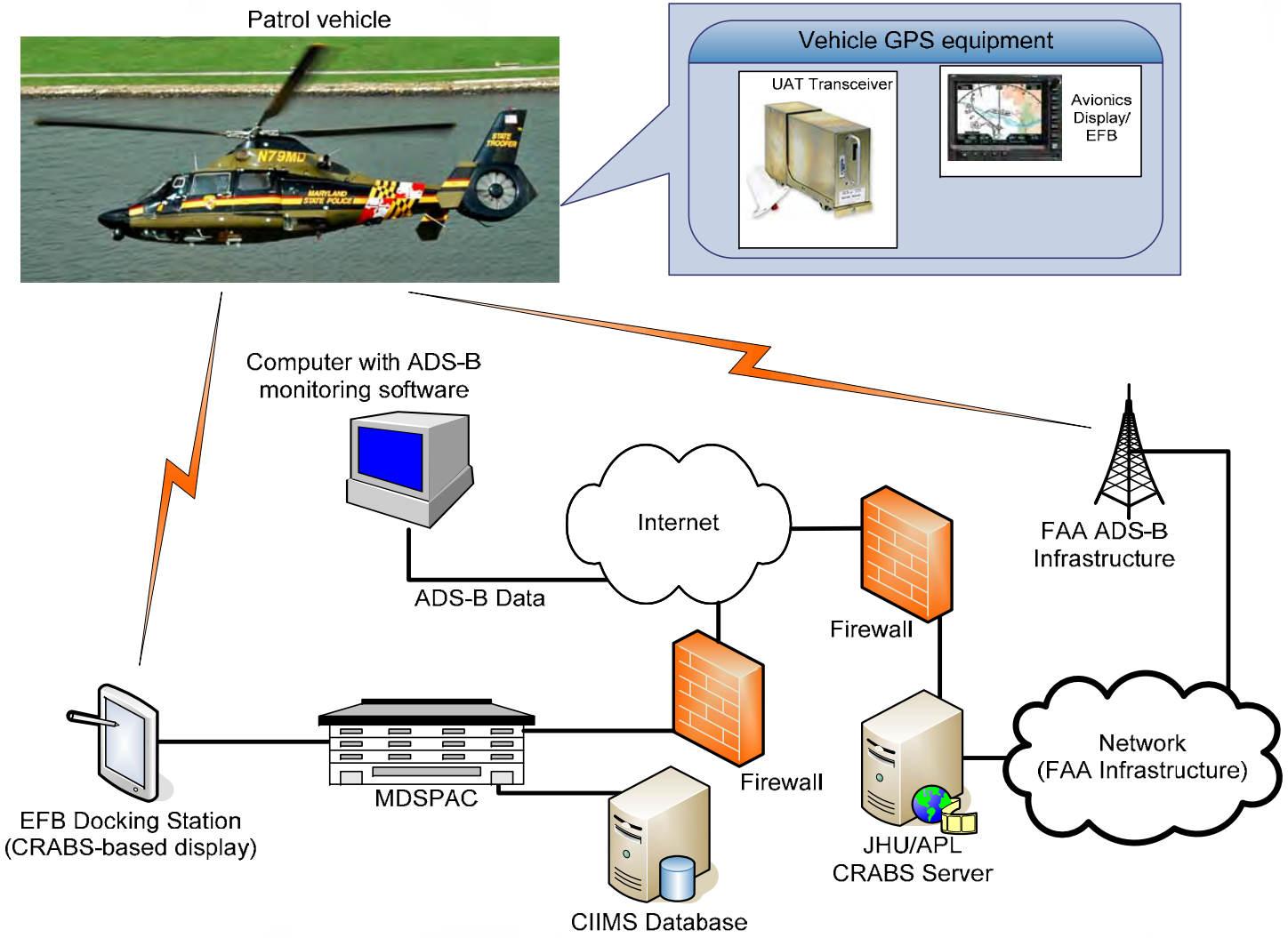
CIP CONOPs


Collection
Analysis
Report Metrics
Asset
Database
Critical
Infrastructure
Protection
Database
- Vulnerability
Assessments
- BZPP
- Demographics
Inspection
Requirements
Tasking & Prioritization
Dissemination
Other
Threat
Sources
• Strategic Decisions
• Operational Actions
• Tactical Response

CIP CONOPs


Current Tasking
Collection
Analysis
Report Metrics
Asset Database
Critical Infrastructure Protection Database
- Vulnerability Assessments
- BZPP
- Demographics
Inspection Requirements
Tasking & Prioritization
Dissemination
• Strategic Decisions
• Operational Actions
• Tactical Response
Other Threat Sources

CIIMS
Technical Components



CIIMS Demo

Sergeant Chad Gainey, MSP

Contact Information

For more information, contact the CCI Division at:

***S&T-C2I@dhs.gov*.**

Pacific Northwest National Laboratory's Northwest Regional Technology Center for Homeland Security

"A Model for Connecting State and Local Users & DHS S&T'Research Agenda"

DHS S&T Stakeholder's Conference West

January 15, 2008

Battelle

Pacific Northwest National Laboratory

W.R. Wiley
Environmental Molecular Sciences
Laboratory

The Guest House at PNNL

Research Operations Building

Pacific Northwest National Laboratory

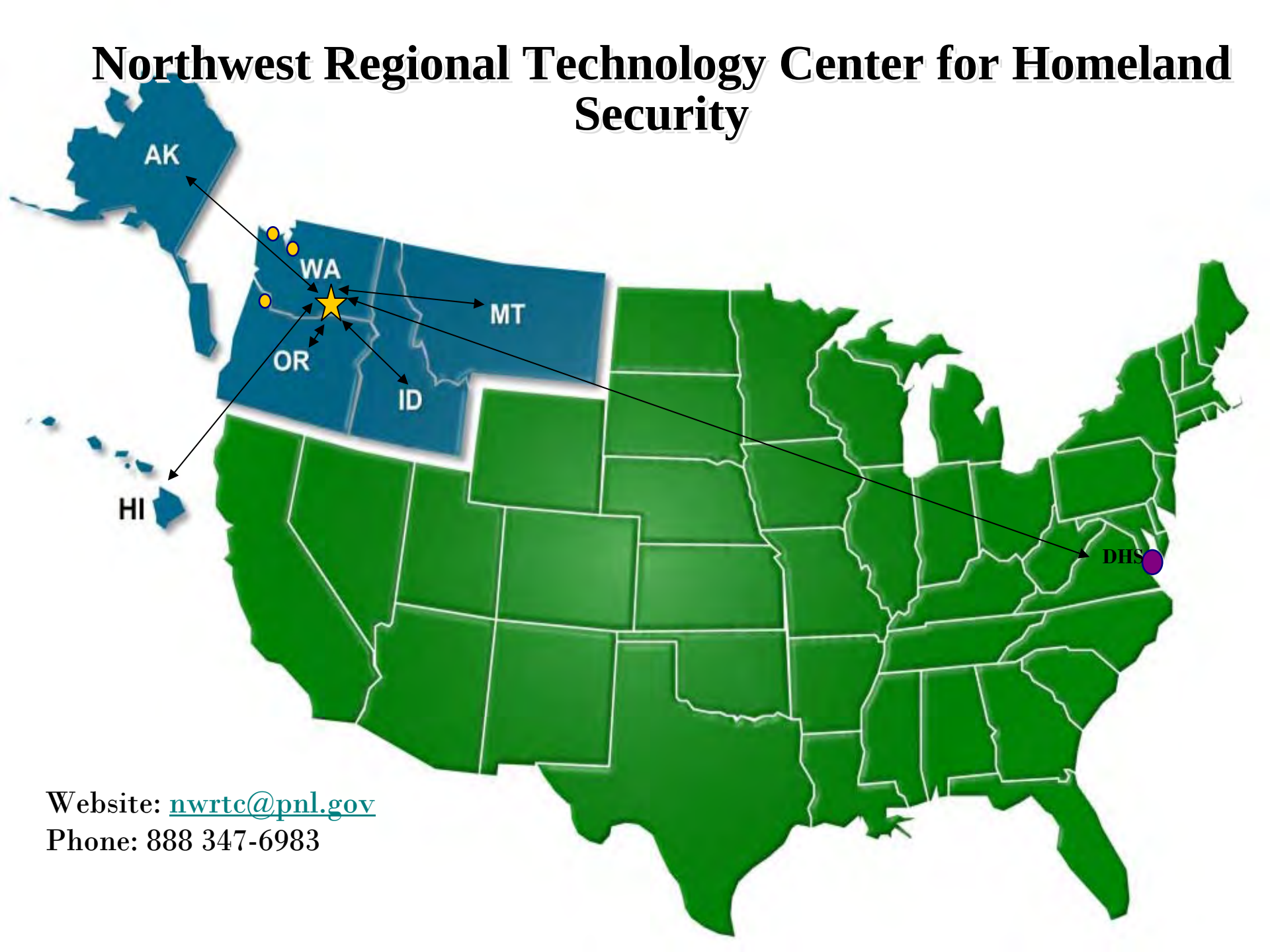
Sequim

Seattle

Richland

Portland, OR

Northwest Regional Technology Center for Homeland Security



Website: nwrtc@pnl.gov
Phone: 888 347-6983

NW Regional Technology Center for Homeland Security

Vision: Be *widely recognized and valued in the Northwest as the key resource enabling science and technology solutions* for Homeland Security Prevention, Detection, Emergency Preparedness, and Response & Recovery.

Mission: Lead collaborative efforts between technology developers and users to: 1) define critical technology needs and develop functional requirements that will be provided to DHS S&T to influence the R&D agenda and 2) enable deployment of early stage technologies

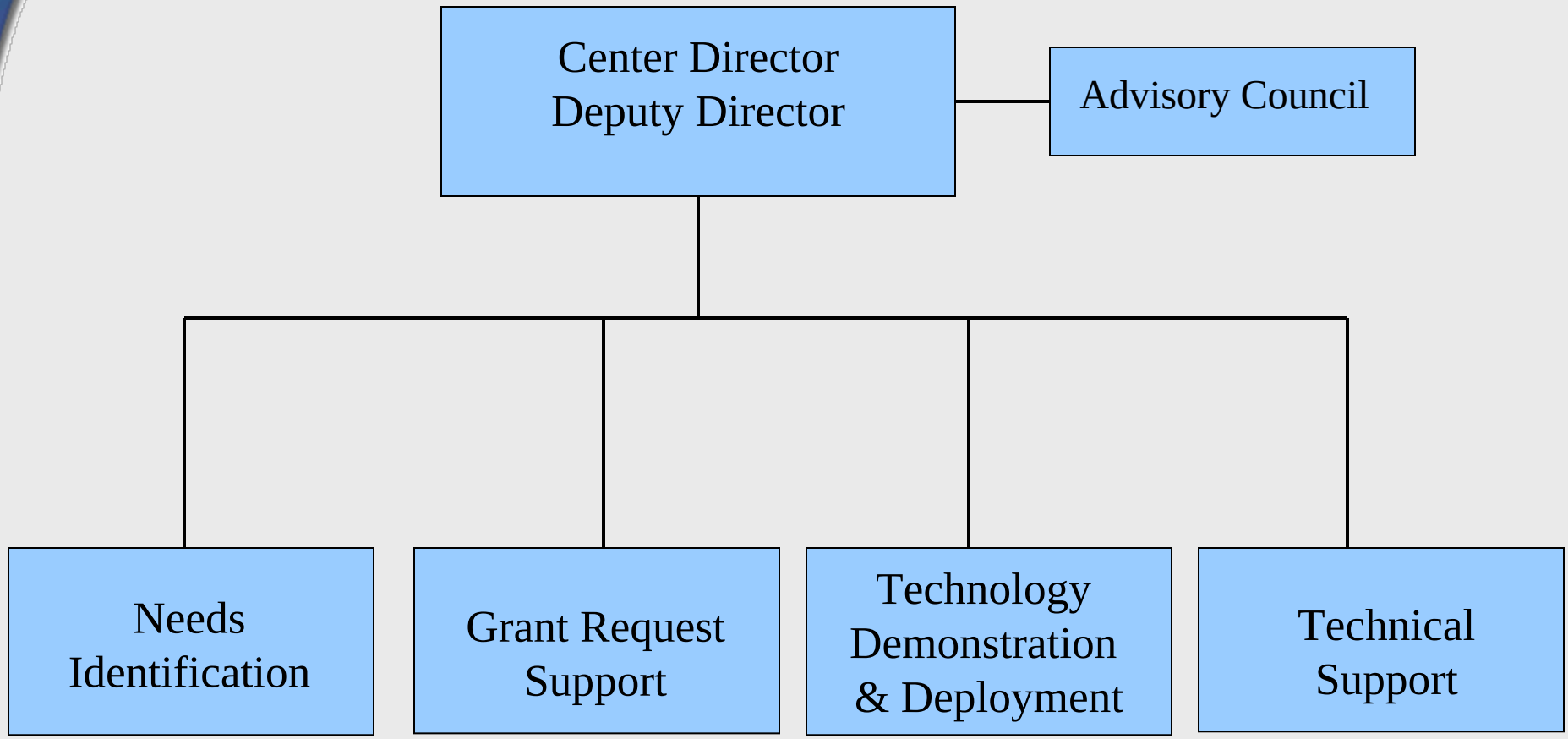
Organizational Values

- Give the voice to State and Local Users for technology needs and requirements to influence the R&D agenda
- Accelerate development and demonstration of technology solutions through early and continuous user engagement
- Provide unbiased information to assist with acquisition and deployment decisions
- Serve as a window to national labs, providing state and local users with access to in depth technical capability
- Provide value at every engagement with Public Safety professional and Emergency Managers

So what is it?

- The Northwest Regional Technology Center (NWRTC) is a virtual resource center supporting regional preparedness, response, and recovery by enabling homeland security solutions for emergency responder communities and federal, state, and local stakeholders in the Northwest.
- Objectives
  - Serve as a conduit between the Northwest region, the DHS S&T and the broader technology development community to communicate technology gaps and requirements.
  - Accelerate the development and deployment of technologies that are effective homeland security solutions for the region, and accelerate technology transfer to the national user community.
  - Foster a collaborative spirit across agencies and jurisdictions.
  - Serve the region's preparedness and response communities as the primary resource for information on homeland security solutions, policies, and procedures.

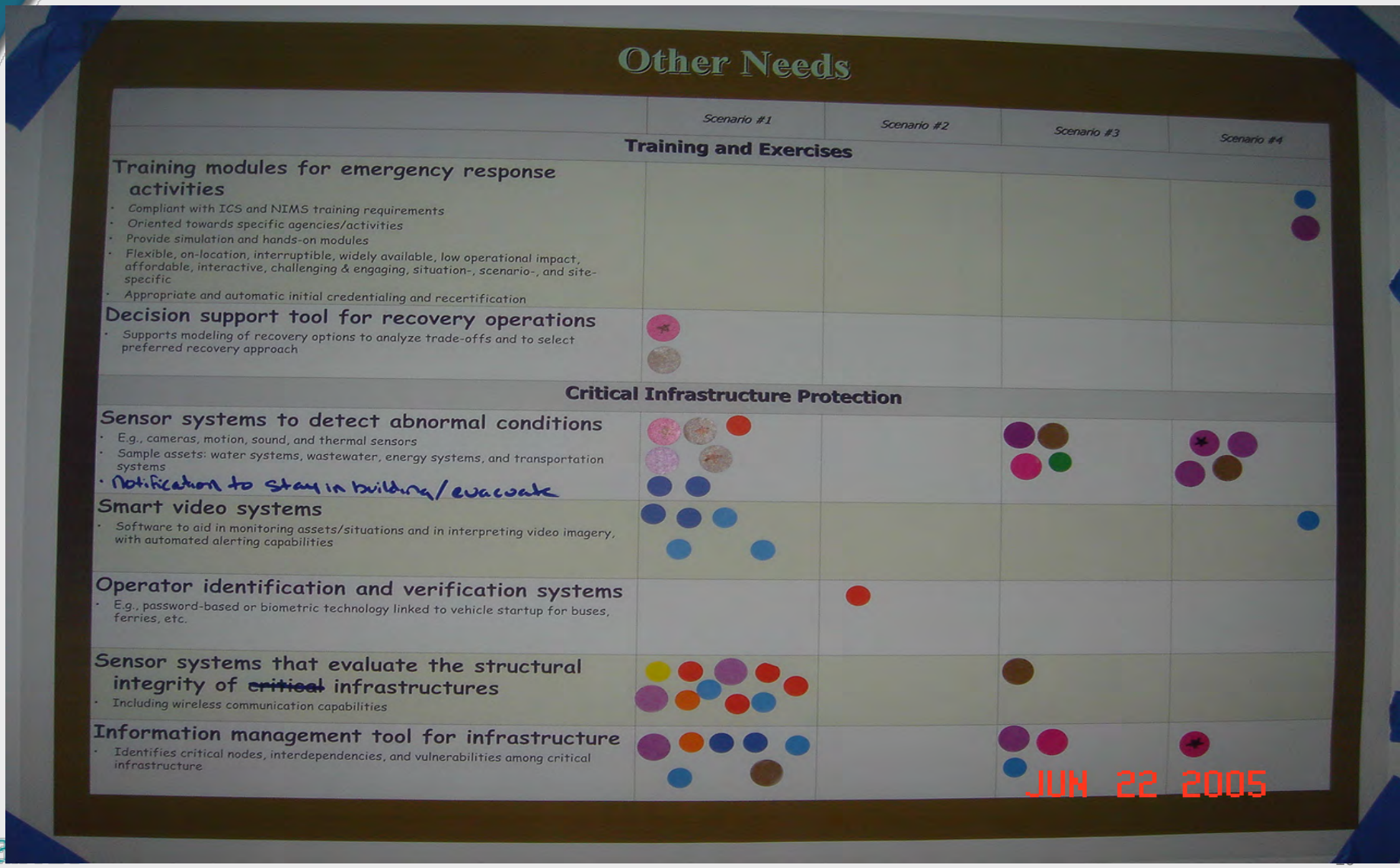
NW Regional Technology Center for Homeland Security



Needs Identification

- Engage a wide range of emergency management and public safety professionals across multiple jurisdictions to systematically identify needs
- Prioritize needs within disciplines and validate
- Conduct workshop with representation from multiple disciplines to prioritize needs.
- Validate and document outcomes

Needs Identification (cont'd)



Grant Support

- Needs assessment provides foundations and justifications for specific grant requests
- Independent reviews can strengthen grant request justifications
- Independence of Center can be used to help reconcile differences between priorities in State and UASI grant requests

Technology Demonstration & Early Deployment

- Work with DHS S&T, State and Locals to match maturing technologies to communities and users that can accelerate technology development and support national deployment
- Facilitate agreement on key success factors and expectations between multiple disciplines and multiple jurisdictions
- Support the technology provider develop a project plan that defines user contributions and commitments
- Assist with demonstration/deployment activities as needed

Technical Support

- Refer users to Federal resources for unbiased technology evaluations
- Provide consultation on technology issues
- Direct users to existing technologies where appropriate
- Refer unmet needs to DHS S&T or other federal agency for inclusion in the R&D agenda

Example Activities

- Regional Technology Integration
- Emergency Response and Communications Planning
- Interagency Biological Restoration Demonstration
- Fusion and Counter Terrorism Center

Regional Technology Initiative (RTI) Seattle

Goal Make regional, state, and local jurisdictions safer through the introduction and transfer of existing and new technology systems that improve preparedness and response capabilities.

Value

- **Assessment Phase** Used by Seattle Urban Area and DHS to support DHS and Law Enforcement Grant Applications to improve regions preparedness
- **Solutions Phase** Piloting and deploying technologies strengthening regional preparedness and supporting national deployment
  - Interoperable communication
  - Credentialing (SRA)
  - 3-D Responder Locator (L3)
  - Interconnected Emergency Operations Center (SAIC)
  - Uniform Incident Command Data System (Paragon)

Radiological Emergency Response Plan and Guidance on Emergency Communication for King County

Goal Develop an emergency response plan, including a risk-communication guidance manual, considering the effects on waste water treatment plant workers, treatment processes and facilities from an RDD.

Value

- King County understands its waste water system vulnerabilities, risks and monitoring needs
- A response plan is in place
- Guidance for emergency communications is in place
- King County is sharing this with other jurisdictions in the NW (Wa and OR) for application in other regions.

Interagency Biologic Restoration Demonstration (IBRD)

Goal Joint DHS/DTRA program will develop, test and demonstrate the Consequence Management Plan and supporting technologies to restore and recover from a bioterrorist attack on a large urban area/military installation.

Value

- The plan will be specific to the Seattle Urban Area, and applicable nationally
- The plan will be tested and demonstrated with local responders to ensure efficacy
- Plan will provide a focus on exercising restoration and recovery, an inherent weakness in emergency management
- The plan, although focused on a bio event, will be applicable to recovery and restoration from any major disaster

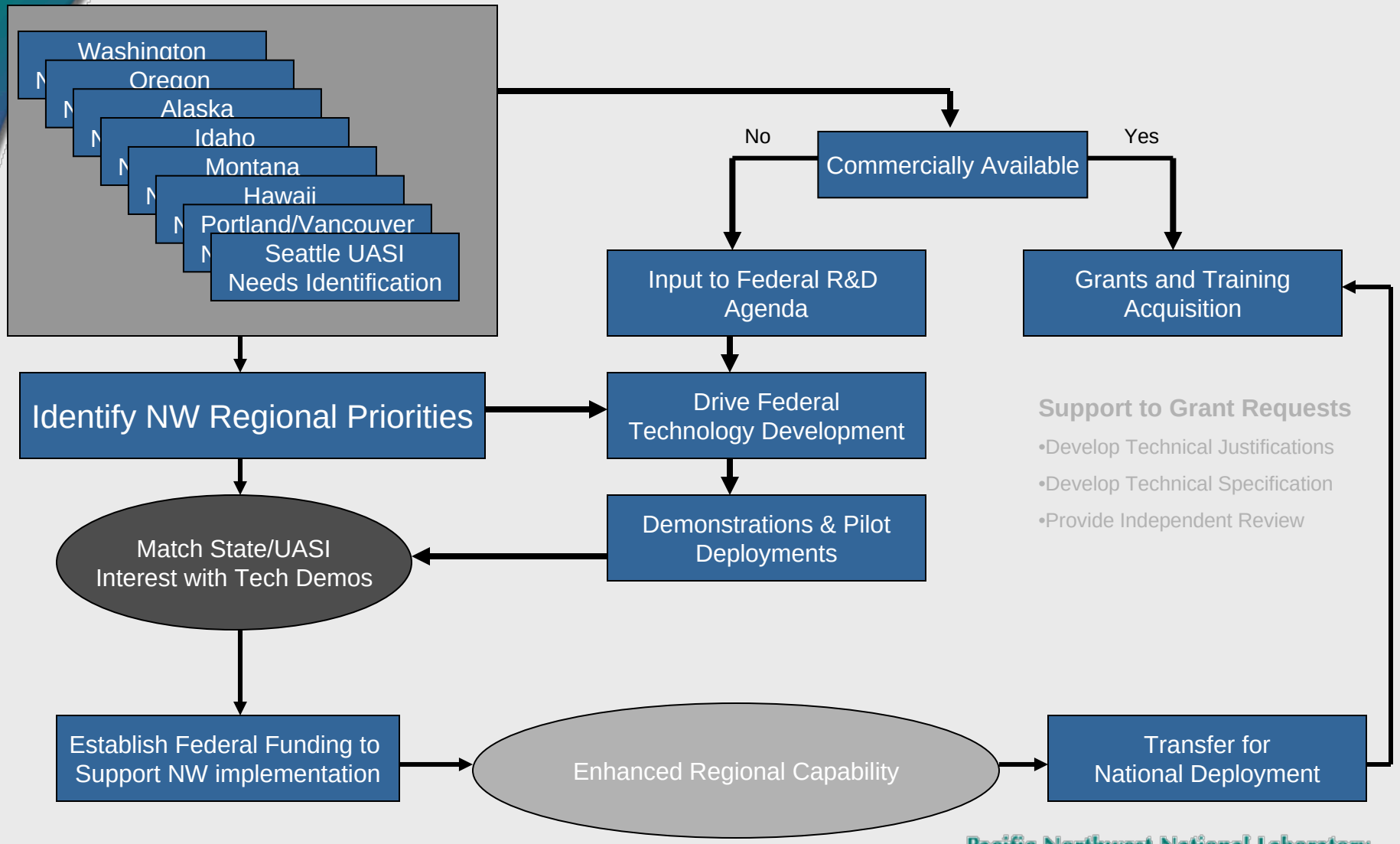
Puget Sound Fusion and Counterterrorism Center

Goal Merge resources to provide the greater Puget Sound region with a robust information fusion capability using advanced technologies to protect citizens, businesses and infrastructure from criminal and terrorist threats while respecting the privacy and civil rights of citizens.

Value

- Detect, deter, prevent, and respond to terrorism and organized criminal activity by joining state and regional resources to create an integrated, multi-partner, 24/7 all-crimes information fusion center
- Provide investigative and intelligence analysis support to regional agencies and organizations
- Support law enforcement operations during emergencies and major events
- Test and evaluate new technologies for intelligence analysis and detection of chemical, biological, radiological, nuclear and explosive threats

PNNL Vision for NW Collaborations



Possible National Model

- Charge National Labs with establishment of Centers that operate consistent with the values established for the NW Center
- DST S&T and States use the Centers as a conduit to identify needs and accelerate development of needed solutions
- Centers collaborate to share needs information with the intention of creating a common view of user needs and priorities at the national level
- DHS S&T provides base funding to support Center operations, provided operations are non-parochial and technology provide neutral

Northwest Regional Technology Center

for Homeland Security

The Northwest Regional Technology Center (NWRTC) is a virtual resource center supporting regional preparedness, response, and recovery by enabling homeland security solutions for emergency responder communities and federal, state, and local stakeholders in the Northwest.

Questions

TechSolutions
Solutions for First Responders

Greg Price
Director, TechSolutions
First Responder Technologies
Science and Technology Directorate
Department of Homeland Security

"Putting First Responders First"

Homeland Security
Science & Technology

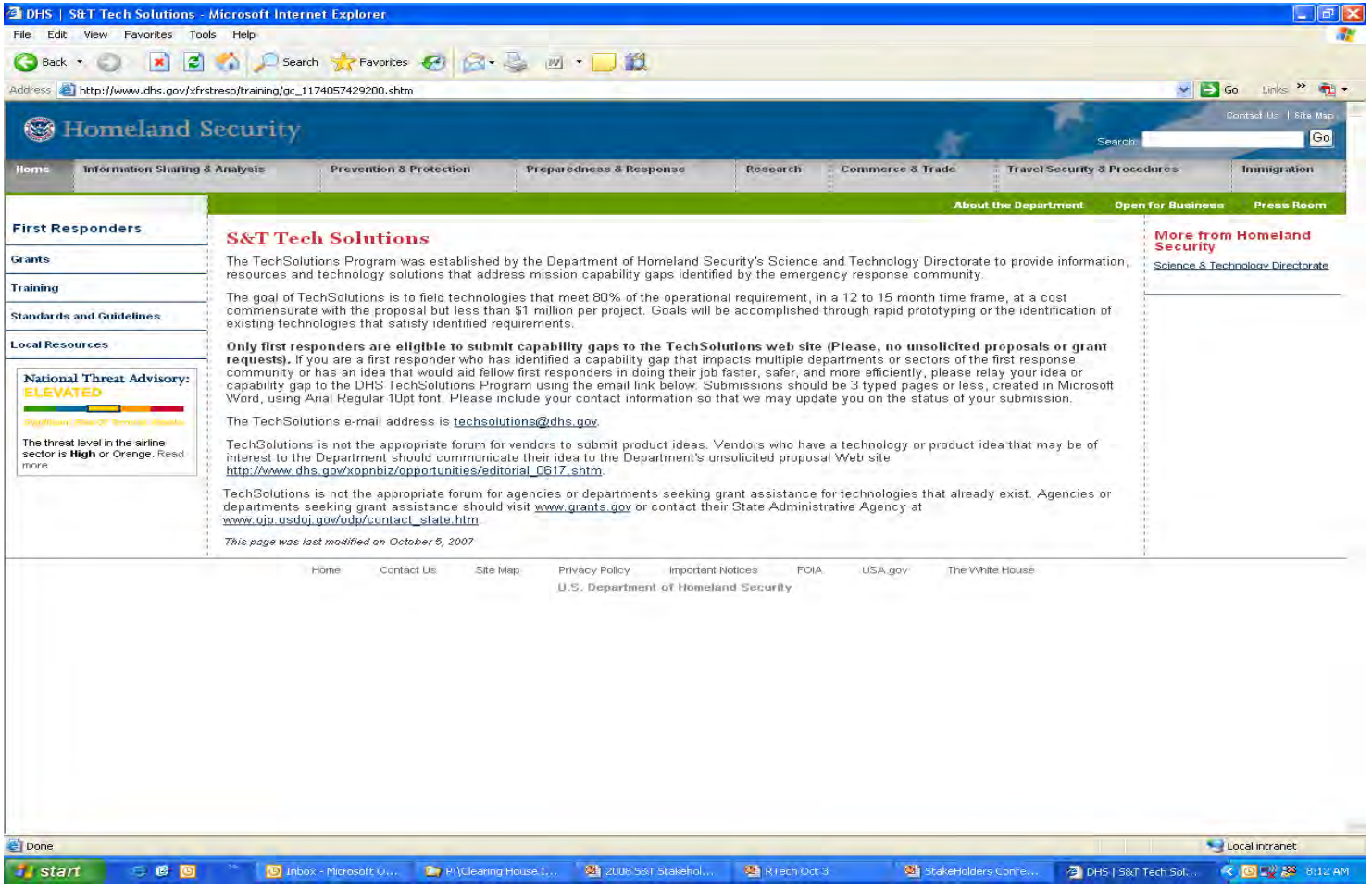
What is TechSolutions?

The mission of TechSolutions is to rapidly address technology gaps identified by Federal, State, Local, and Tribal first responders

- Field prototypical solutions in 12 months
- Cost should be commensurate with proposal but less than $1M per project
- Solution should meet 80% of identified requirements
- Provide a mechanism for Emergency Responders to relay their capability gaps
  - Capability gaps are gathered using a web site (www.dhs.gov/techsolutions)
- Gaps are addressed using existing technology, spiral development, and rapid prototyping
- Emergency Responders partner with DHS from start to finish

Homeland Security

TechSolutions Web Page



Homeland Security

TechSolutions Review Process

Start Project

Request Comes In From First Responder

2 days

Request Is Validated

10 days

Request is Vetted for Possible Solutions

3 days

Review Solution Ideas

15 days

Downselect Solution ideas and Request Proposals

13 days

Review & Select Winning Proposal

17 days

Selected Proposal Funded (60 days from request)

End Project

Solution is Demonstrated (12 months from funding)

Submitter and Technical Experts involved throughout

Homeland Security

TechSolutions Investments

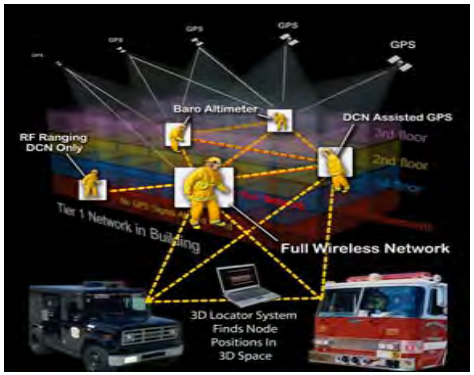
Customer	Project Name	Status
Border Patrol	Carrizo Cane	Funded
Fire Service	3-D Personnel Location	Funded
EMT	Ocular Scanning	Funded
Coast Guard	Biometric Identification	Funded

Homeland Security

TechSolutions Investments

Carrizo Cane Eradication

3-D Location



Ocular Scanning

Biometric Identification

Homeland Security

Technologies Under Consideration

Next Generation Breathing Apparatus

Fire Ground Compass

Interoperable Communications

Vital Sign Monitoring

Vehicle Mounted Chem/Bio Sensor Detection

Homeland Security

Questions?

?

Homeland Security

Homeland Security

Science and Technology

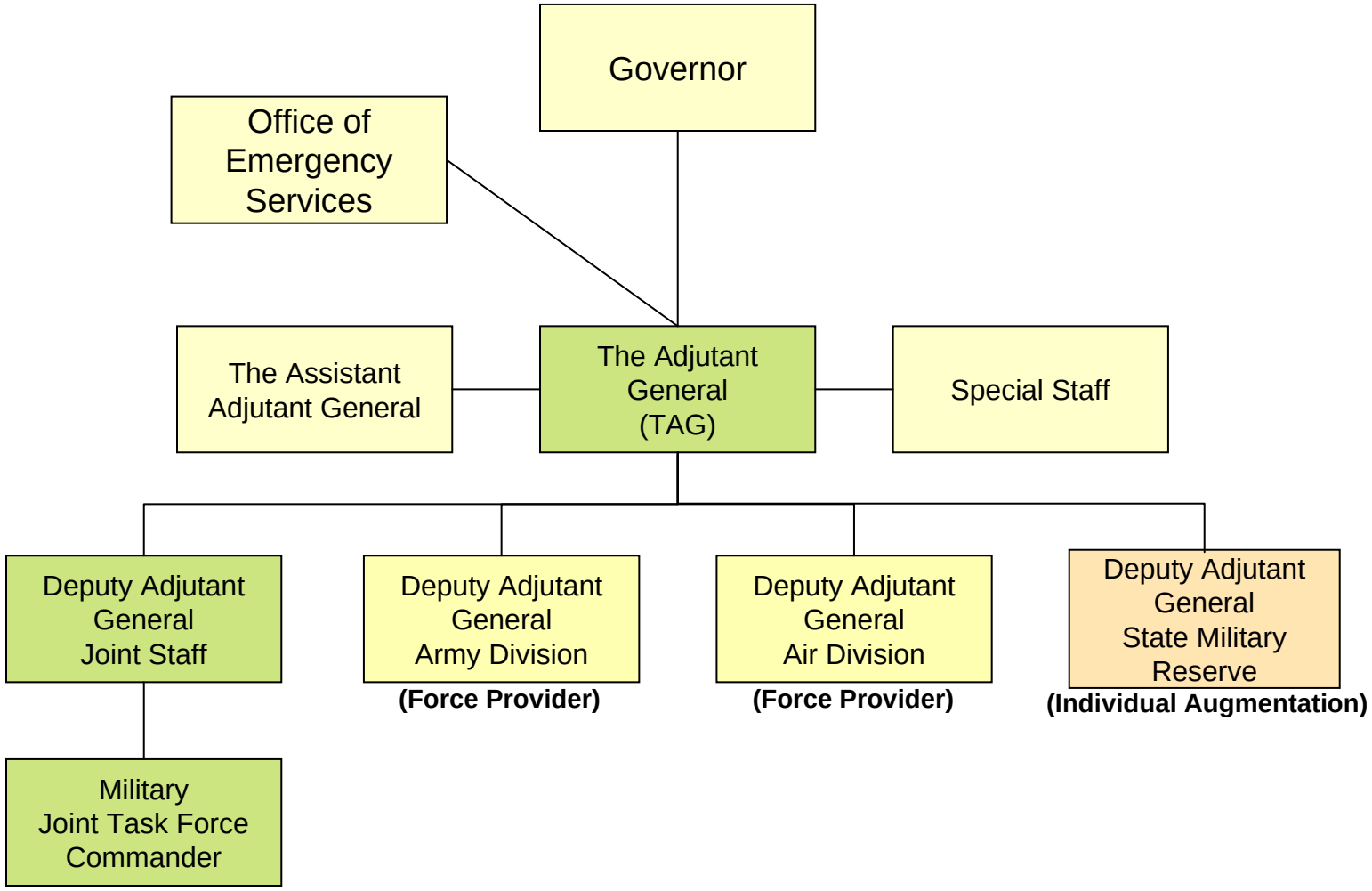
California National Guard

Colonel Daniel Nelan
Chief of Staff
Joint Forces Headquarters

Mission Statement

Manages operations in support of the Adjutant General to deter, prevent, defeat, and mitigate threats and aggression aimed at the State and Emergency Management Assistance Compact (EMAC) partners when so ordered by the Governor or the President; on order provides military assistance to civil authorities, including consequence management operations.

MSCA Operations Organizational Chart



2/26/2008

UNCLASIFIED

CAPABILITIES

AVIATION / AIRLIFT

WEAPONS OF MASS DESTRUCTION (CBRNE)

COMMUNICATIONS

ENGINEER SUPPORT

COMMAND AND CONTROL

LOGISTICS

MAINTENANCE

MEDICAL

SECURITY

TRANSPORTATION

AVIATION / AIRLIFT

- Aerial Search and Rescue
- Fixed and Rotary Wing Airlift
- Aerial Fire Suppression
- Modular Aerial Fire Fighting System (MAFFS)
- Aerial Incident Analysis & Assessment

Chemical, Biological, Radioactive, Nuclear, Explosives (CBRNE) WEAPONS OF MASS DESTRUCTION

- Two Civil Support Teams
  - Specially trained & equipped Army and Air National Guard experts in Chemical, Biological and Radiological hazards
- CBRNE Enhanced Response Force Package (CERFP)
  - Search and Extraction capability equivalent to Federal Type 2 (medium) resources
  - Decontaminate up to 225 ambulatory and 75 non-ambulatory patients per hour
  - Medical support for civilian and first responders

COMMUNICATIONS

- Secure and non-secure HF/VHF/UHF voice and data link.
- CST Unified Command Suite
- Incident Commander's Command, Control, and Communications Unit (IC4U)
- Joint Incident Site Communications Capability (JISCC) (Fielding in MAR 08)

ENGINEER

- Debris removal (limited)
- Hasty road and Bridge construction (limited)
- Construction of emergency housing facilities/base camps
- Water purification and distribution
- Power generation and distribution (3KW-750KW)

COMMAND AND CONTROL

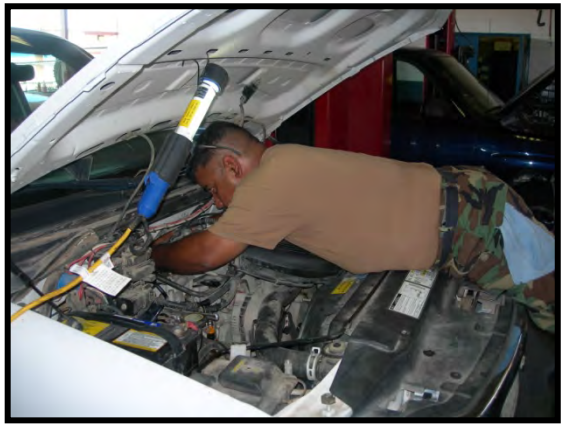
- Operational Joint Task Force Headquarters
- Operate the Joint Operations Center 24/7
- Joint Reception, Staging, Onward Movement, & Integration (JRSOI) Operations
- Mobile Command Post (can be air mobile)

LOGISTICS

- Sustain deployed forces
- Secure and distribute supplies and maintain order at locations
- Receive incoming units, shelter, assemble, brief and orient units, transport out of affected areas.
- Emergency State and Federal contracting
- 5 & 10K Forklift
- Airlift Load Masters

MAINTENANCE

- Support sustainment of assigned unit equipment during all phases of the mission through regionally located facilities within the state
  - Maneuver Area Training Equipment Sites (track)
  - Combined Support Maintenance Shops (rolling stock/ weapons)
  - 30 - Field Maintenance Shops
  - Aviation Support Facilities
  - Aviation Depot
  - First line maintenance (U.S. Boarder Patrol)



MEDICAL

- Support Civilian Emergency Medical System during mass casualty operations to include emergency life saving steps, evacuation, shelter, etc.
- Emergency Medical Treatment
- Conduct mass decontamination operations
- Small Portable Expeditionary Aero-Medical Rapid Response (SPEARR) equipment set
- Combat Life Savers

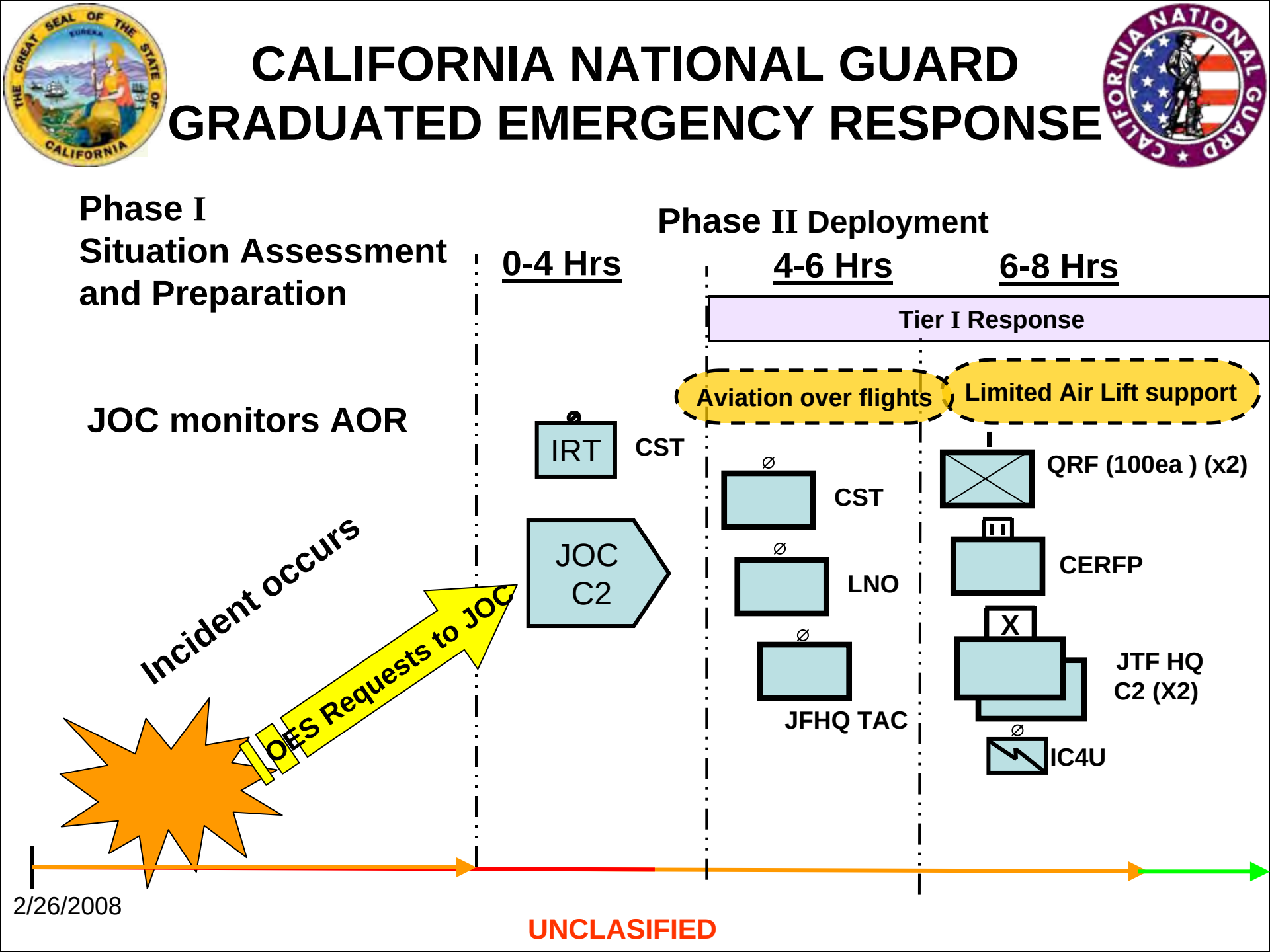
SECURITY

- Provide an organized, trained and equipped military force capable of assisting civilian law enforcement agencies in maintaining law and order, and providing site and area security to critical infrastructure
  - Quick Response Force (QRF) - One Company sized element, appox 100 Soldiers mobilizes and self deploys to incident within 6 hours of notification
  - Rapid Reaction Force (RRF) - One Battalion sized element, appox 500 soldiers mobilizes and deploys to incident within 12 hours of notification
  - Follow on full activation of available forces

TRANSPORTATION

- High Mobility Multipurpose Wheeled Vehicle (HMMWV)
- Heavy Equipment Transporter System (HETS) (Ground)
- Light/Medium Trucks (2.5 & 5 ton) (personnel / cargo)
- Tractor Trailer
  - Stake and Platform
  - Lowboy
- Fuel Tankers (JP8)
- Palletized Load System

CALIFORNIA NATIONAL GUARD
GRADUATED EMERGENCY RESPONSE



UNCLASIFIED

CALIFORNIA NATIONAL GUARD
GRADUATED EMERGENCY RESPONSE

Phase III
Assistance to Civil Authorities

12 Hrs | **24 Hrs** | **72 Hrs**

Tier I Response | Tier II Response | Tier III Response

SECFOR BN (500 ea) (X2)

X JRSOI

XX Regional/State JTF HQ

Follow- on CNG Forces

T-10 /Out of State NG Forces

All Aviation Assets Available

Joint Reception Staging Onward movement Integration Operations

Phase IV
Transition to Civilian Agencies

Exit Criteria

Phase V
Re-deployment Recovery

Recovery Operations

UNCLASIFIED

NIMS/SEMS

- National Incident Management System (NIMS)
  - Provides a consistent nationwide template to enable Federal, State, local, tribal governments, private sector, and non-governmental organizations to work together effectively and efficiently to prepare for, prevent, respond to, and recover from domestic incidents, regardless of the cause, size, or complexity
- California's Standardized Emergency Management System (SEMS)
  - California meets the most critical part of NIMS, the Command and Management portion – Incident Command System – by virtue of SEMS
- NIMS compliance –
  - The CNG, as a state agency called upon to respond to an emergency, is required to meet the training compliance requirements for SEMS and NIMS
    - Includes SEMS Introduction
    - ICS 100 (IS 100)
    - NIMS (IS 700)

CNG integration in NIMS/SEMS/ICS

Joint Field Office	**JFHQ Liaison @ JFO**
State	**JFHQ Liaison @ SOC**
Regional	**JFHQ Liaison @ REOCs**
Operational Area	***JFHQ / JTF Liaison @ County EOCs***
Local	***JFHQ / JTF Liaison @ City EOCs***
Field	**JTF Commander / staff @ ICP**

- Operates under the Unified Command principles
- In direct support to the Incident Commander (IC)
- Fall under any branch or multiple branches
- Remains under the C2 of CNG Command, but receives mission specific tasks from the IC
- The CNG and Title 10 leadership work together to achieve the objectives established by the lead civil authority

LIMITATIONS

- Economy Act - Work requested will not be in direct competition with the domestic private sector

- Anti-deficiency Act - Government officials may not make payments or commit to make payments at some future time for goods or services unless there is enough money in available appropriation

- Federal Mobilization – Availability of High Demand/Low Density capabilities due to current operational environment

NATIONAL GUARD DUTY

	Emergency State Active Duty	Title 32 (Federal – State control)	Title 10 (Federal (Non-State) Control)
Command & Control	Governor	Governor	President
Where	IAW State Law	USA	Worldwide
Mission Types	Disaster Response Search and Rescue Wildfire Suppression	Training Presidential Declaration Disaster Federal Security Counterdrug National Special Security Event	Overseas training Mobilization for Conflict Wartime
Examples of Domestic Missions	San Diego Fires 2007 Floods 96 Northridge Earthquake Steve Fosset SAR	Aerosafe Hurricane Katrina Jump Start Winter Olympics (Utah)	OIF/OEF GWOT (Noble Eagle) 92 L.A. Riots Yama Sakura (ODT)

UNCLASIFIED


Questions

Civil Support Team
Weapons of Mass Destruction

Lieutenant Colonel Jeff Smiley
J3 Department
Joint Forces Headquarters, California Military Department

Unclassified

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Civil Support Team (WMD)

- Presidential Decision Directive 39, 62
- Nunn, Lugar, Domenici Act
- 10 Original Teams (2000)
- 17 Additional Teams (2001)
- 5 Additional Teams (2002)
- 12 Additional Teams (2004)
- 11 Additional Teams (2005)

55 Total Teams

CST (WMD) Mission

Provide Support to Civil Authorities by:

- **IDENTIFYING** CBRNE agents/substances
- **ASSESS** current and projected consequences
- **ADVISE** civilian responders regarding appropriate actions and response measures
- **ASSIST** with requests for additional State, Federal and DoD assets
- SAVE LIVES, prevent human suffering and mitigate great property damage.

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Civil Support Team (WMD)

- 22 Full-Time Army and Air National Guardsmen whose only mission is to **<u>support civil authorities</u>**.

  - 24 hours a day, 7 days a week.
  - 1200 to 1800 hours of certified individual training.

  - US Army C,B,R,N,E training.
  - Civilian police/Fire/EMS and HAZMAT training.

CST -vs- HAZMAT Team

- Robust Detection Capability
- Trained on Local, State and Federal response

- Trained across all FRE Functional Areas
- Expertise in specific WMD fields

95th and 9th CST (WMD) Primary Responsibility

95th CST (WMD)
250 mile Radius
response –
Bay Area
(#1 priority)

9th CST (WMD)
250 mile Radius
response –
LA Area
(#1 priority)

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95th and 9th CST (WMD) Secondary Responsibility

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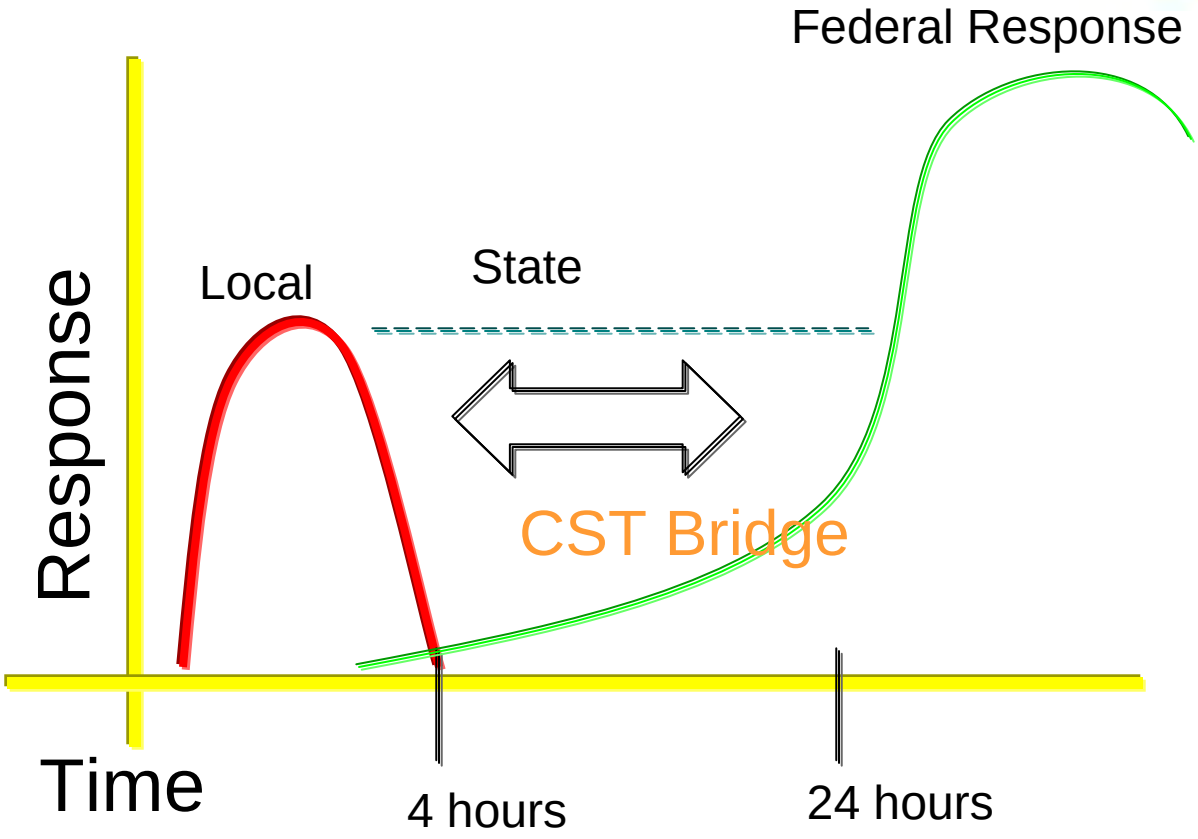
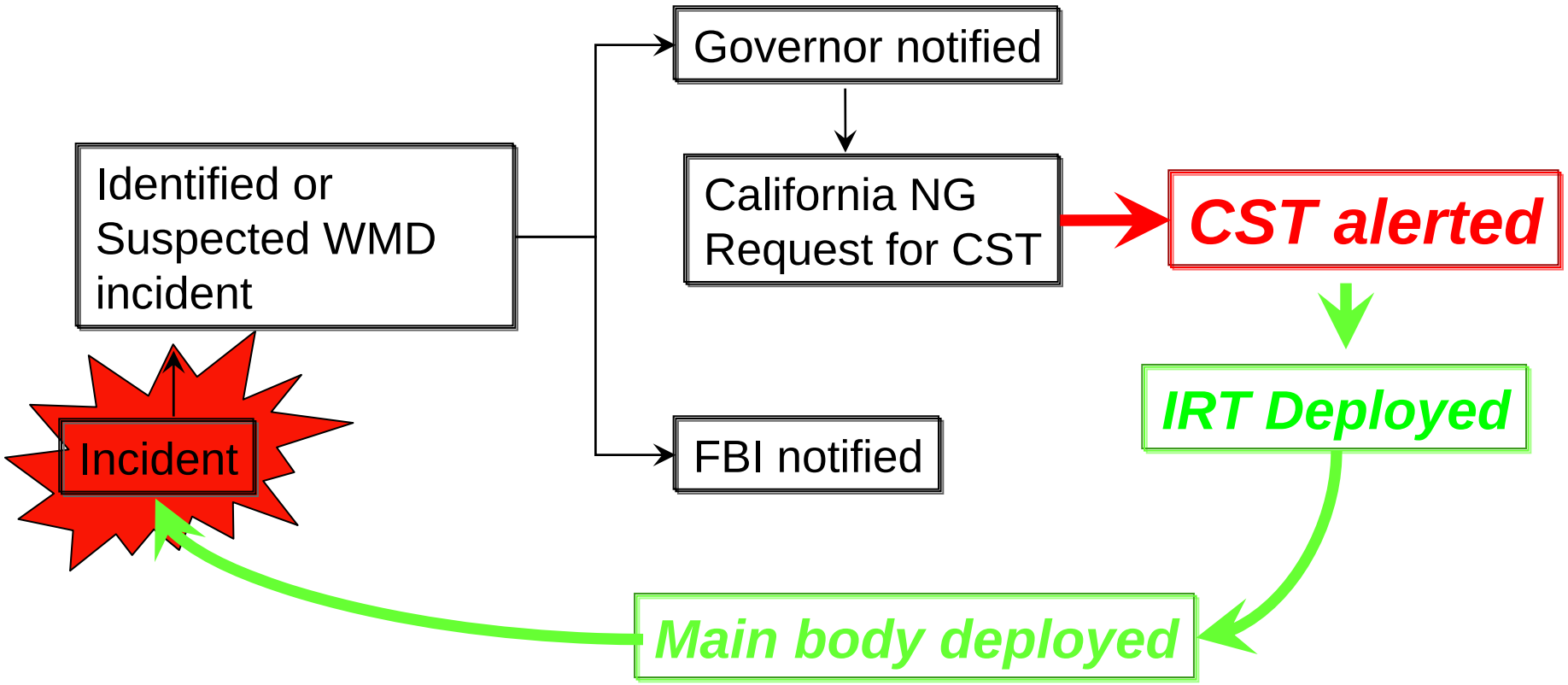
Response Bridge



Cycle of Response



Deployment Options

- **Full Team Deployment**
- **By Section Deployment**
  - Science Section
  - Communication Section
  - Operations Section; or provide technical reference capability from home station
  - Medical Section
  - Survey Section
  - Decontamination Section

Survey Capabilities

- 8 Survey Team Members
- Conduct CBRNE/TIC/TIM Reconnaissance
- Environmental Sampling Operations
- Limited Mitigation Operations

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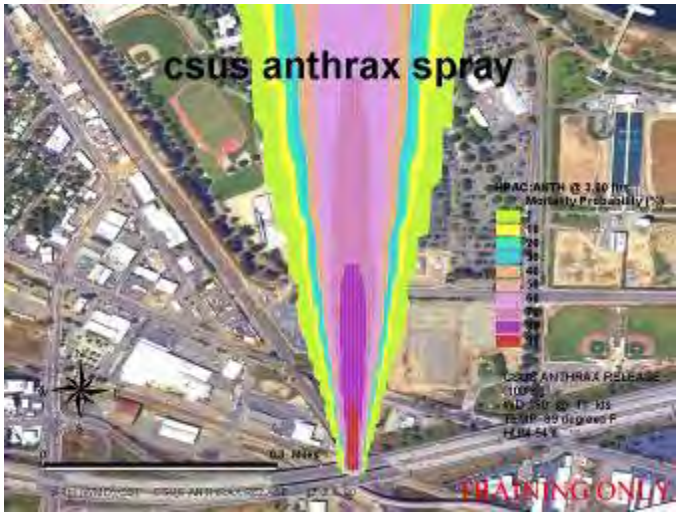
Operations Capabilities

- Aerial Photography and Satellite imagery
- Site Plans / Weather Monitoring
- Synchronization of Resources
- Pre and Post Incident CBRNE Threat Analysis
- C4 (Command, Control, Computers and Communications)

Modeling Capabilities



- Provides information on population and critical facilities.
- Provides Down-range Hazard plume modeling.
- iClient models
- Reach back with National Atmospheric Release Advisory Center (NARAC)
- Consequence Assessment Tool Set (CATS)
- Hazardous Predictions And Assessment Capabilities (HPAC)
- GIS integration and Analysis

Communications Capabilities

- Provide interface across the spectrum of first responder frequencies and response organizations.
- Secure Reach Back to experts at varied State and Federal agencies.
- Provide secure telephone, internet, networking, and facsimile capabilities to an incident scene.
- Provide interoperability and a Common Operating Picture (COP)

Medical Capabilities

- Medical Officer (PA, MD, DO)
- Medical Operations Officer (Medical Liaison)
- Advise on treatment of WMD casualties.
- Integrates DoD medical support
- Medical Intelligence
- Technical Reference
- Medical Surveillance Programs

Science Capabilities

- Nuclear Medical Science Officer
- Equipped to conduct laboratory based, on-site presumptive analysis of WMD agents and Toxic Industrial Chemicals and Toxic Industrial Materials

Analytical Lab System (ALS)

- Hapsite Gas Chromatograph-Mass Spectrometer (GC-MS)
- Fieldspec Gamma Spectrometer
- Isolation & Sample Prep Glove Boxes
- RAPID PCR Thermocycler
- Avatar 370 Fourier Transform Infrared Spectrometer (FT-IR) with Golden Gate Sample System

Analytical Lab System (ALS) Continued

- Nikon/Olympus Polarized Light Microscope with Fluorescence Capabilities
- Smiths Illuminat-IR Fourier Transform Infrared Spectrometer (FT-IR) Integrated with the Microscope
- Hand-held Immunoassay Tickets (JPO)
- Basic Microbiological Analyses

Decontamination Capabilities

- Two Man Technical Decon Team
- Chemical, Biological & Radiological Decon
- Limited Mass Decon Capabilities

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CST Operations

- **Immediate Response**
- **Pre-Stage Events (SSSE, NSSE, Dignitary Support)**
- **Maritime Response**
- **Technical Resource / Reach Back**
- **WMD Training / Exercise Support**
- **All Hazard Operations (Hurricane, Earthquake)**

Questions?

95th CST
Hayward, CA
LTC Greg Potter
510-780-1395

9th CST
Los Alamitos, CA
LTC Andrew Flynn
562-795-2460

Guarding America. . .Defending Freedom

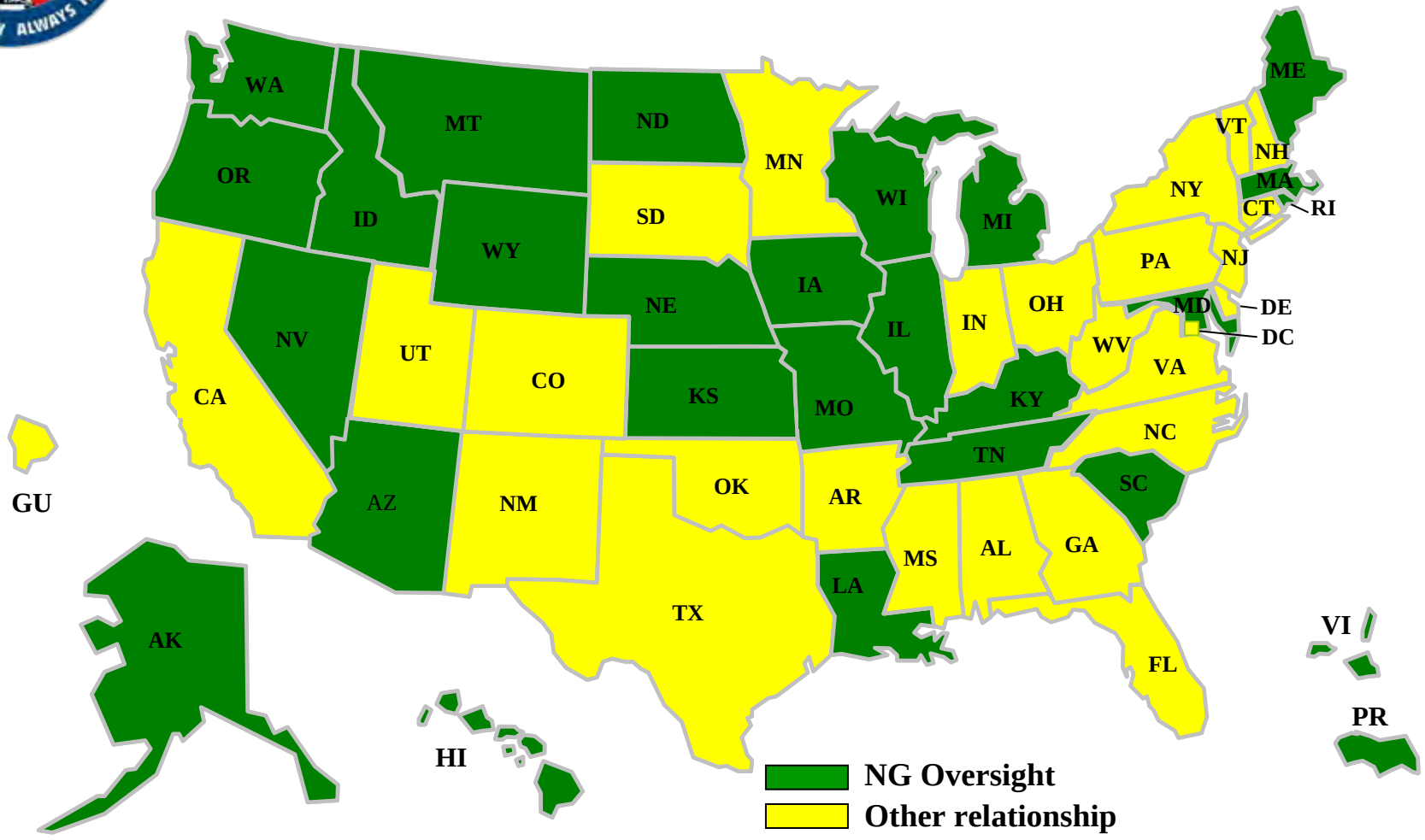
The Adjutant General, Oregon

Major General Raymond F. Rees

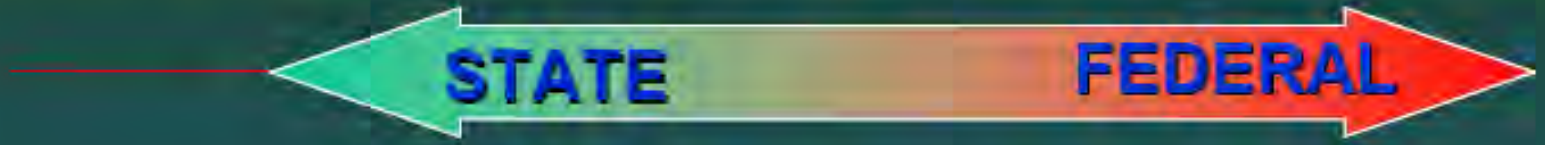
15 January 2008

The National Guard's Military First Responder Role

NG/SEMA Relationship



National Guardsman Duty Status Comparison



	State Active Duty	*Title 32*	*Title 10*
Command & Control	Governor	Governor	President
Where	IAW State Law	USA	Worldwide
Pay	State	Federal	Federal
Mission types	IAW State Law (Riot control, Emergency Response, etc.)	Training, And other federally authorized.	Overseas Tng, & as assigned after mobilization
Discipline	State Military Code	State Military Code	UCMJ
Support Law Enforcement	Yes	Yes	Limited by *Posse Comitatus*

Federal Limitations

The **Insurrection Act of 1807** is the set of laws that govern the President of the United States of America's ability to deploy troops within the United States to put down lawlessness, insurrection and rebellion. The general aim is to limit Presidential power as much as possible, relying on state and local governments for initial response in the event of insurrection.

The **Posse Comitatus Act** prohibits federal military personnel to act in a law enforcement capacity within the United States, except where expressly authorized by the Constitution or Congress. The Coast Guard is exempt from the Posse Comitatus Act.

NG
Domestic Response

- Post 9-11 Security
  - **50,000** Guard members nationwide deployed to secure airports and other vital facilities.
- Katrina
  - Within eight days, **51,000** National Guard members from every state and territory had been deployed on state orders to respond to the disaster.

- Counter Drug
  - The program is designed to support all levels of government, including DoD, law enforcement and community-based counterdrug operations in the fight against illicit drugs. Currently funded at **1,882** National Guardsmen.
- Operation Jump Start
  - **6,000** National Guard personnel deployed in Texas, New Mexico, Arizona and California to assist the Border Patrol in securing the border with Mexico.

National Guard Initiatives
CERFP and CST

- CBRNE Enhanced Response Force Package (CERFP) responds to CBRNE incidents by providing capabilities to conduct casualty/patient decontamination, medical support, and casualty search and extraction.

- Civil Support Teams (CSTs) support civil authorities at a domestic chemical, biological, radiological, nuclear, and high-explosive (CBRNE) incident site by identifying CBRNE agents/substances, assessing consequences and advising on response measures.

NORTHCOM

USNORTHCOM

- **ARNORTH**
  - **DCO (Defense Coordination Office)**
- **JFHQ National Capital Region**
- **AFNORTH**
- **JFHQ Alaska**

DCO →

NG Empowerment Act

Grade & Duties

Increases CNGB Grade to General and designates as a principal advisor to SECDEF through CJCS on matters pertaining to non-federalized NG forces. Additionally, it requires the NORTHCOM Deputy Commander to be filled by a National Guard Officer—a Lieutenant General Position.

Plan for Response to Disasters and Attacks

Requires SECDEF, in consultation with the DHS, CJCS, NORTHCOM and CNGB on plan for coordinating use of National Guard and active duty armed forces when responding to disasters, terrorism and other man-made disasters.

Civil Support Requirements

Requires SECDEF, in consultation with DHS, to determine military-unique capabilities needed for civil support in an incident of national significance of a catastrophic incident, and, in coordination with Service secretaries & CJCS develop and implement a plan for providing the necessary funds and resources.

Questions?

FirstResponder.gov
Breakout 8

Sonja Rodriguez
Director Tech Clearinghouse
Science and Technology Directorate
Department of Homeland Security
January 15, 2008

Homeland Security

Tech Clearinghouse Mission

To rapidly disseminate technology information on products and services to Federal, State, local, Tribal government and private sector entities, in order to encourage technological innovation and facilitate the mission of the Department of Homeland Security.

- Establishes Central Federal Technology Clearinghouse
- Issues Announcements for Innovative Solutions
- Establishes S&T Technical Assessment Team
- Provides guidance for the evaluation, purchase, and implementation of homeland security enhancing technologies
- Provides users with information to develop or deploy technologies that would enhance homeland security
- Enables technology transfer

Improved Knowledge
Sound Acquisition Decisions

Homeland Security

FirstResponder.gov

Product Description:

- Develop a web-based central resource that serves as a one-stop-shop to disseminate technology information to Federal, State, local and tribal agencies
- Encourages participation of outside agencies such as CDC, Red Cross, etc.
- Fulfills Section 313 of the Home Land Security Act of 2002.

TRL at start: 3 **TRL at transition:** 7

FirstResponder.gov

Planned Demos/Deliverables/Transitions:

- Develop certified and accredited Version 1.0 of www.firstresponder.gov – Nov 1st 2007
- Single login capability
- Integration of additional First Responder Tools Jan 2008

Summary:

- Held bi-weekly demo of current capabilities
- Demonstrated prototype capability during SF Conference Nov 2007
- Beta Release during LA Stakeholders Conference Jan 2008

Cost: 

Performance: 

Schedule: 

Notes: Good Progress

Homeland Security

Performers
Booze Allen Hamilton

Figure 1: FirstResponder.gov Homepage

A. Tabs to DHS entities
B. Site navigation pane
C. National Threat Advisory
D. RSS news feed
E. Calendar of upcoming events

Homeland Security

Figure 2: FirstResponder.gov Fire, EMS, Law Enforcement menu options

Homeland Security

Live Demo

Homeland Security

Questions?

Homeland Security

Homeland Security

FirstResponder.gov
Breakout 8

Sonja Rodriguez
Director Tech Clearinghouse
Science and Technology Directorate
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January 15, 2008

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Improved Knowledge
Sound Acquisition Decisions

Homeland Security

FirstResponder.gov

Product Description:

- Develop a web-based central resource that serves as a one-stop-shop to disseminate technology information to Federal, State, local and tribal agencies
- Encourages participation of outside agencies such as CDC, Red Cross, etc.
- Fulfills Section 313 of the Home Land Security Act of 2002.

TRL at start: 3 **TRL at transition:** 7

FirstResponder.gov

Planned Demos/Deliverables/Transitions:

- Develop certified and accredited Version 1.0 of www.firstresponder.gov – Jan 2008
- Single login capability
- Integration of additional First Responder Tools Jan 2008

Summary:

- Held bi-weekly demo of current capabilities
- Demonstrated prototype capability during SF Conference Nov 2007
- Beta Release during LA Stakeholders Conference Jan 2008

Cost: 

Performance: 

Schedule: 

Notes: Good Progress

Homeland Security

Performers
Booze Allen Hamilton

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Emergency responders with ideas for capabilities or other job aid can share them with the Department through the DHS TechSolutions Program.

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http://www.dhs.gov/xfrstresp/training/gc_1174057429200.shtm

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» EMS

NIOSH Emergency Response EMS Resources

National Institute for Occupational Safety and Health Emergency Response Resources.

National Native American Emergency Medical Services Association Homepage

The NNAEMSA is the only national organization that specifically serves supports and represents approximately 70 individual Native American Emergency Medical Service programs. These 70 EMS programs Provide pre-hospital care to over half a million Native American people who live on reservations or in non-reservation area (such as Oklahoma and Alaska).

Associations and Memberships

Academy of Emergency Medicine

AEM publishes information relevant to the investigations, educational advancements, and practice of Emergency Medicine. Subject matter is diverse, including preclinical studies, clinical topics, health policy, and educational methods.

American Ambulance Association

The AAA was formed in response to the need for improvements in medical transportation and emergency medical services. The Association services as a voice and clearinghouse for ambulance services across the nation. The Association views prehospital care not only as a public service, but also as an essential part of the total public health care system.

Find a AAA American Ambulance Association state links

» Library

JUSTNET

Justnet Library

Search the NLECTC Virtual Library by keyword, topic, or information type using the form below. The links at the top and bottom of the screen will also retrieve information from the library.

Homeland Security Digital Library

The HSDL is a collection of homeland security policy and strategy related documents. It supports local, state and federal analysis and decision-making needs and assists academics of all disciplines in homeland defense and security related research. The HSDL provides quick access to over 50,000 important U.S. policy documents, presidential directives, and national strategy documents as well as specialized resources such as theses and research reports from various universities, organizations and local and state agencies.

OSAC

Overseas Security Advisory Council Library

This section includes documents about security precautions and responses in regard to a biological, chemical, radiological or nuclear threat or incident.

Acronyms

Glossary

Frequently Asked Questions (FAQ)

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U.S. Fire Administration

National Fire Academy Education and Training

USFA for NFA Students and Instructors.

GRANTS.GOV

DHS Grants from Grants.gov

Grants.gov was established as a governmental resource named the E-Grants Initiative, part of the Presidential 2002 Fiscal Year Management Agenda to improve government services to the public.

Pre-Disaster Mitigation Program

The Pre-Disaster Mitigation (PDM) program provides funds to states, territories, Indian tribal governments, communities, and universities for hazard mitigation planning and the implementation of mitigation projects prior to a disaster event.

FEMA Assistance to Firefighters Grants Program

A program of the Federal Emergency Management Agency (FEMA), grants are awarded to fire departments to enhance their ability to protect the public and fire service personnel from fire and related hazards. Three types of grants are available: Assistance to Firefighters Grant (AFG), Fire Prevention and Safety (FPandS), and Staffing for Adequate Fire and Emergency Response (SAFER).

State Fire Training System Grants

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Preparedness and Training

TOPOFF 4 Exercise Planning

TOPOFF

Top Officials 4 (TOPOFF 4) is the national premier terrorism preparedss exercise, involving top officials at every level of government, as well as representatives from the international community and private sector. Taking place October 15-19, 2007, the TOPOFF 4 Full-Scale Exercise (T4 FSE) will feature thousands of federal, state, territorial, and local officials. These officials will engage in various activities as part of a robust, full-scale simulated response to a multi-faceted threat.

Ready
Prepare. Plan. Stay Informed.

Ready.gov

The Ready Campaign asks individuals to do three key things to prepare for the unexpected: get an emergency supply kit, make a family emergency plan, and be informed about the different types of emergencies that could occur and their appropriate responses.

Lessons Learned Information Sharing
LLIS.gov

Lessons Learned Information Sharing

The national network of Lessons Learned and Best Practices for emergency response providers and homeland security officials. LLIS.gov, a secure, restricted-access information resource is designed to facilitate efforts to prevent, prepare for and respond to acts of of terrorism and other incidents across all disciplines and communities throughout the US.

Emergency Management Institute

FEMA EMI Course Listings

EMI Courses and Schedules.

ICS Resource Center

FEMA ICS Resources

ICS Training Materials and Opportunities.

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Equipment

InterAgency Board

The InterAgency Board (IAB) for Equipment Standardization and Interoperability is designed to establish and coordinate local, state, and federal standardization, interoperability, compatibility, and responder health and safety to prepare for, train and respond to, mitigate, and recover from any incident by identifying requirements for an all-hazards incident response with a special emphasis on Chemical, Biological, Radiological, Nuclear or Explosive (CBRNE) issues.

NIOSH Emergency Response Resources Equipment

A resource for personal protective equipment.

Emergency Vehicle Safety

Emergency Vehicle Safe Operations for Volunteer and Small Combination Emergency Service Organizations

National Personal Protective Technology Laboratory

A resource for respirator standards.

1401 Technology Transfer Program FAQs

The 1401 Technology Transfer Program facilitates and documents several efforts and works to expand public awareness of these efforts via outreach and communication initiatives. For example, the DoD logistics community transfers surplus items and equipment directly to participating states, which can also leverage the power of certain federal procurement contracts to get the best value for eligible purchases.

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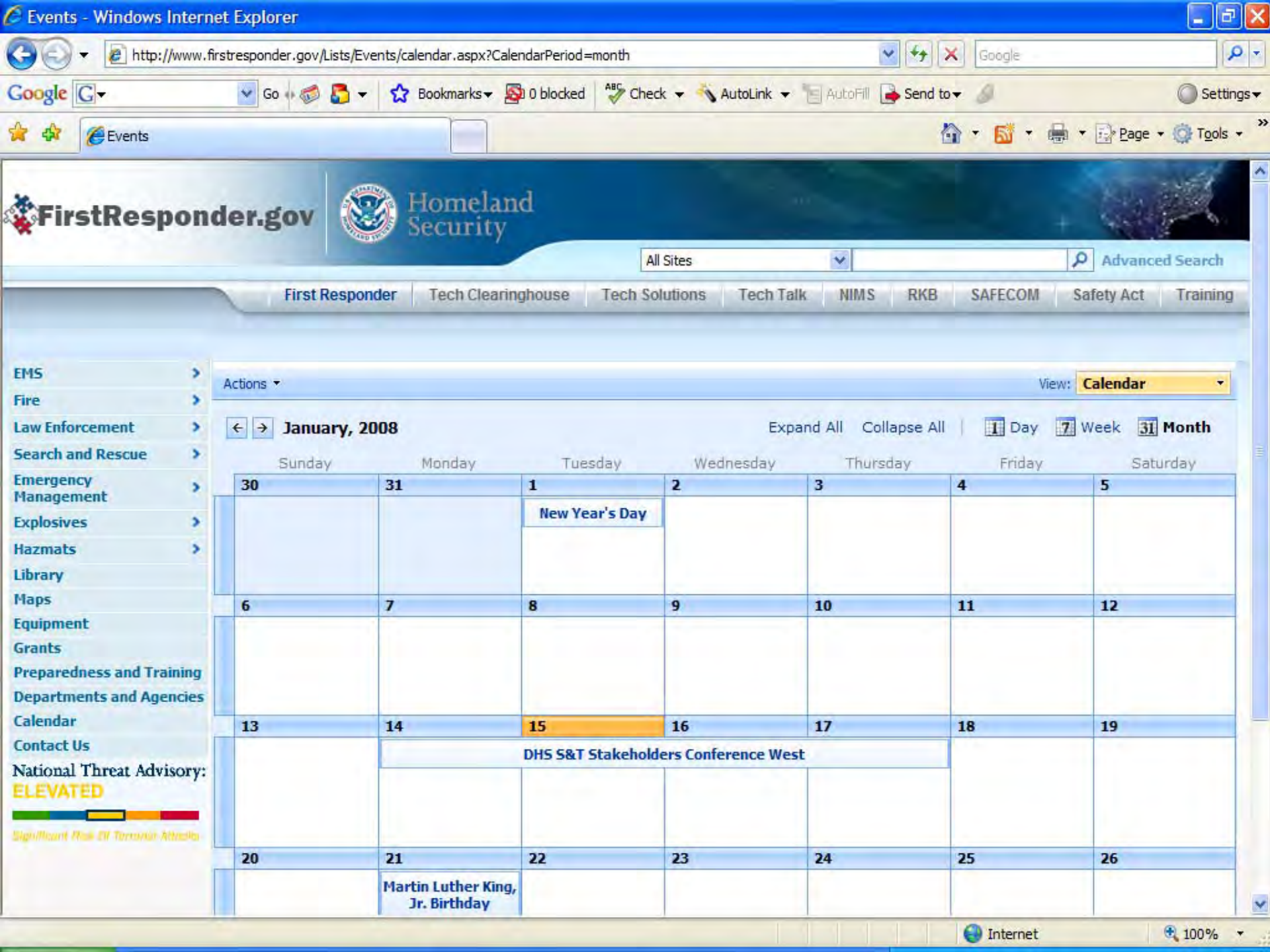
Maps

Fire - Wildfire Map Viewer

A map of the continental unites states identifying all current fires.

Weather Maps Provided by NOAA

FEMA Disaster Maps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Questions?

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Managing the Cultural change when a Common Operational Picture Program is implemented

The Paradigm Shift for those with a COPP and those planning a COPP

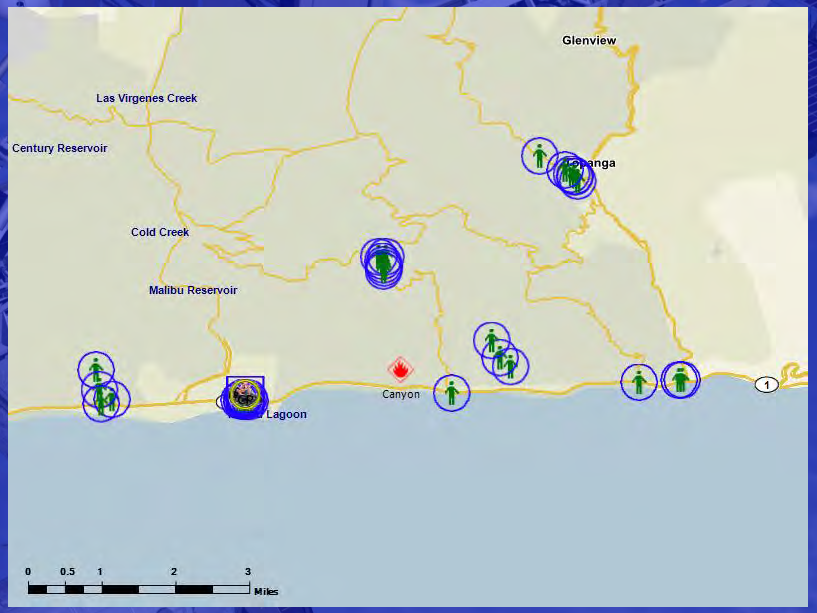
By Wayne Tolosa, President/CEO

My Background

- Jet Propulsion Laboratory
- Aerospace – Military Satellites
- Instruction – Electronics
- Reserve Captain 25 years Sheriff's
- SAR 10 years
- DHS, Dmort, Swift Water, Fire – Training
- Incident Commander
- EMT
- Special Environmental Task force agent
- Voluntary Firefighter BLFD
- Antares Architect and System Designer

What is a Common Operational Picture Program?

- Maps, GIS etc.
- Communications
- Sharing
- Public Info System
- MOU
- Flexibility
- Working together in a dynamic environment and adapting to it rapidly



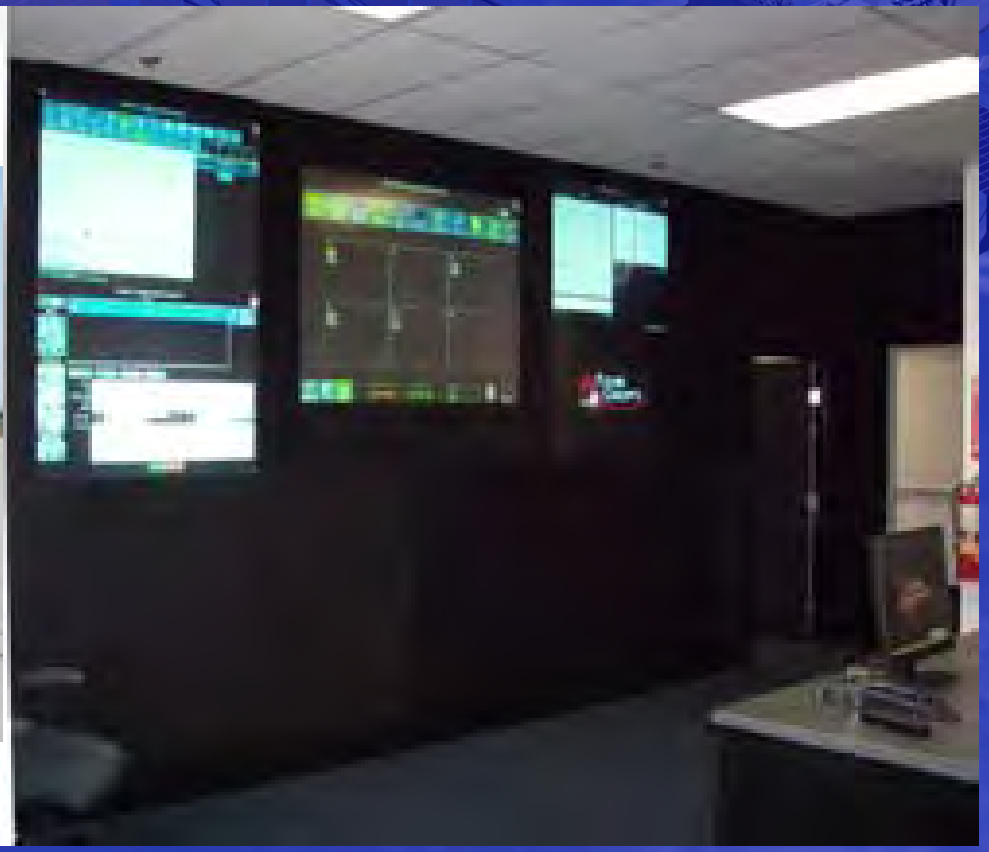
COPP continued

- Do we need it at incidents?
- Does it help us?
- Technology's strengths are in managing data.
- It can change on the fly.
- Data can travel long distances in seconds
- It can transmit large amounts of data simultaneously to many.
- "Technology liaison"
- Radio technology - what are the limitations?
- Security must be reviewed for data transfer.

Why You Need One

- What people in the Super Dome?
- True interoperability
- Rapid effectiveness - don’t just outlive the problem.

How do you Implement a COPP or Deal with a existing one?



Plan, Design, Plan, Design

Flexibility

- Ability to handle all hazards
- The when, where, how, who, what,…
- Flexibility - different incident types, sizes and personnel .
- Plan for failure - internet, system crashes, infrastructure?
- Work with what you have, this is what we do, 90, 80, 70….

What issues are there and how does it drive new SOPs

- Tactics, Response, Operations, Sitstat…
- Working across multiple agencies
- Working across multiple disciplines
- Dealing with tradition
- Rapid info, mass amounts
- Force multiplier
- Current SOPs were written for today's processes
- Companies look for new processes - Dell
- Recent Big Bear fires, check in at Fawnskin
- Bring aboard the believers
- Situational Awareness
- Sitstat
- Restat

What are the Major Complications?

- Implementation Issues
- Elements of an incident
- Users and Traditions
- Interagency Issues
- Technology Challenges- right technology at the right place and time
- Understanding limits and possibilities of technology
- By design making the technology fit the situation/Incident and personnel limitations.
- Don’t over complicate – continuously reassess and modify, no different than an incident
- Not letting the “powers that be” remotely manage your incident.

Psychology of people and incidents

- Agencies will group together
- Technology encourages unity

Training

- Safety and technology - don’t walk in front of antennas!
- What are the new problems?
- Communications - Importance of Liaisons
- What is technology? Its different to everyone
- How can you use it ?

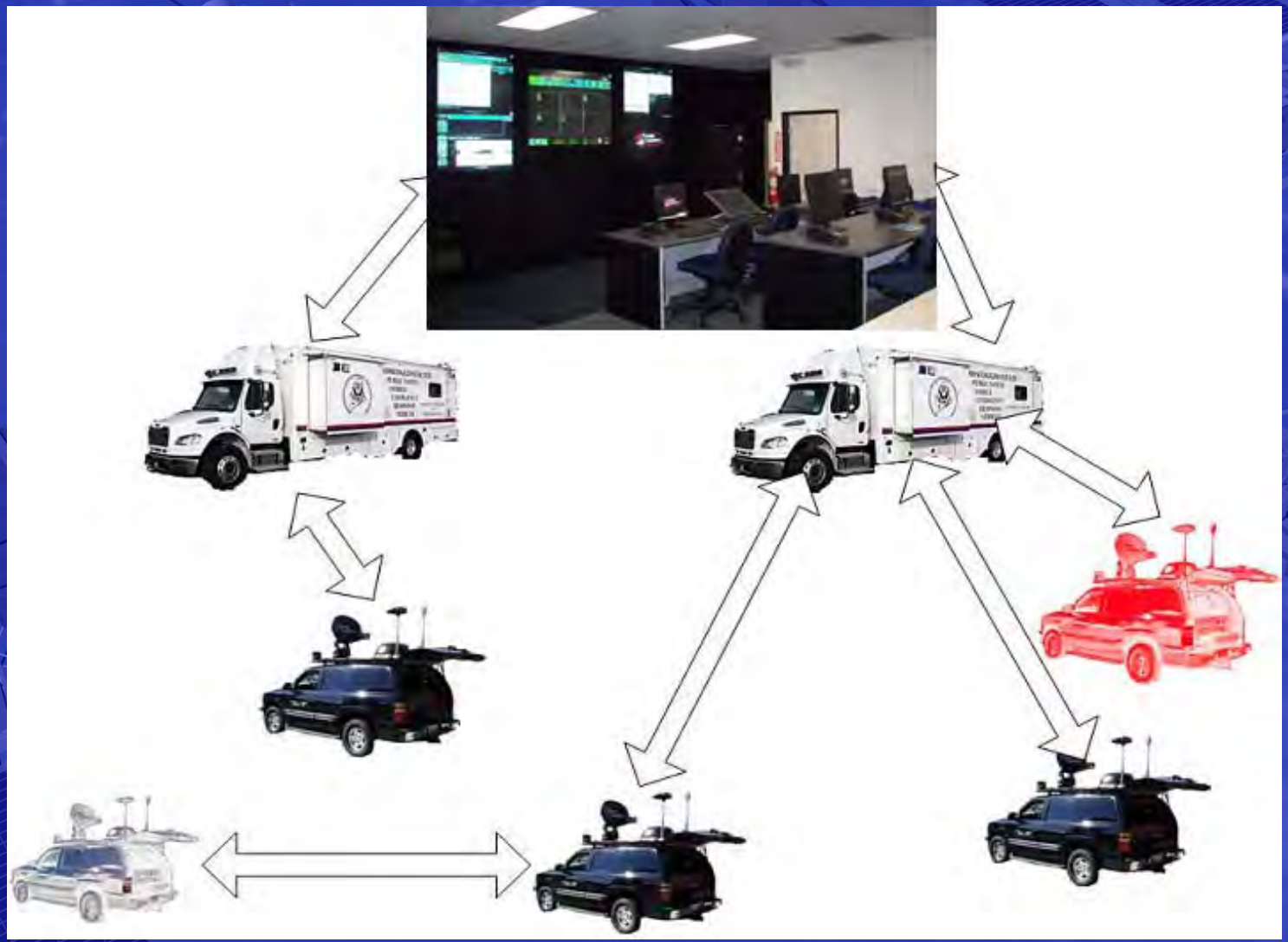
Teach others to change the current mind set.

- Don’t force systems on the non-believers
- Educate others that technology is here to stay
- Use it
- Don’t be afraid to walk into another agency trailer
- Train for failure – real life situations
- Use other technologies – and show the importance. Its only as good as the data you get to it.

Handhelds in COPP

Working Together – Law, Fire & Military

Common Operating Picture Overview



First Responder Model

- Designed for field personnel
- Limited personnel
- Limited Training
- Infrastructure not available (unlike military)
- Don’t turn field personnel into GIS analysts

Designed for many uses.

- All Hazards Approach
- Provides Real-Time situational awareness
- Designed for all types of incidents & disasters.
- Natural – Earthquakes, floods, fires, hurricanes, etc.
- Man Made – WMD, Terrorist attacks
- Tactical – Barricaded suspect, pursuits
- Solution for Katrina

Situational awareness and scene mitigation during an incident.

- Will you have adequate resources on scene?
- When will the next event happen?
- How fast do you want situational awareness?
- Does it help you to know timely information?
- Sit aware starts from the simple person using sneaker net.
- Bringing back information from the field via radio
- Carrying cameras in the field
- Cell phones, faxes, printers
- All of it depends on what technologies you have and how big the incident is.
- How old do you want the IAP to be? Minutes or hours (operational periods)
- What are the communications? Radio, email, messaging, how do we capture this?
- What is Intel?

First Responders are not engineers and engineers are not First Responders (usually)

- Engineers don’t think operations, tactics…
- The difficulty of bridging the gap between first responders, engineering and science.
- This is a huge challenge!

Big Picture, not one piece tells all

- Our job is to assess rapidly and accurately, and deploy assets in a timely manner to protect life, property and the environment.
- What is data?
- How much ?
- Reporting methods – check in
- Statistics for future trends
- What type of data is important to you?
- You will need the ability to sort information

- How to effectively and efficiently handle the increased amounts of data and technology that has become available to first responders.

- Implement a data management plan
- Use the data that is important at the time
- The incident shapes our dynamics (and needs). Initially, mapping may be the most important to show where troops are. Other incidents we need to know who to transport.
- Data will flow at a faster pace than we are ready for.
- If we don’t change, the world around us will move forward.
- The military is the best - not because they have more troops but the best technology.

Operations

- More personnel in the field communicating with cells phones.
- Manage the data with visualizations
- Think about how and where to disseminate it.
- Think of the Public information system
- Create multiple points of inputs
  - Logistic stations
  - Check-in-Out
  - Track resources

Change and a Common Operational Picture Program

- “We have been doing this for years and don’t need to do anything else.”
- Things will always need to be improved.
- Lessons learned from 9-11. Example of Hollywood shootout.
- The problem, where to park, who to contact, is there a liaison person
- Make it easy
- Complication causes people not to use it.
- 90-10 Rule

Too Much!

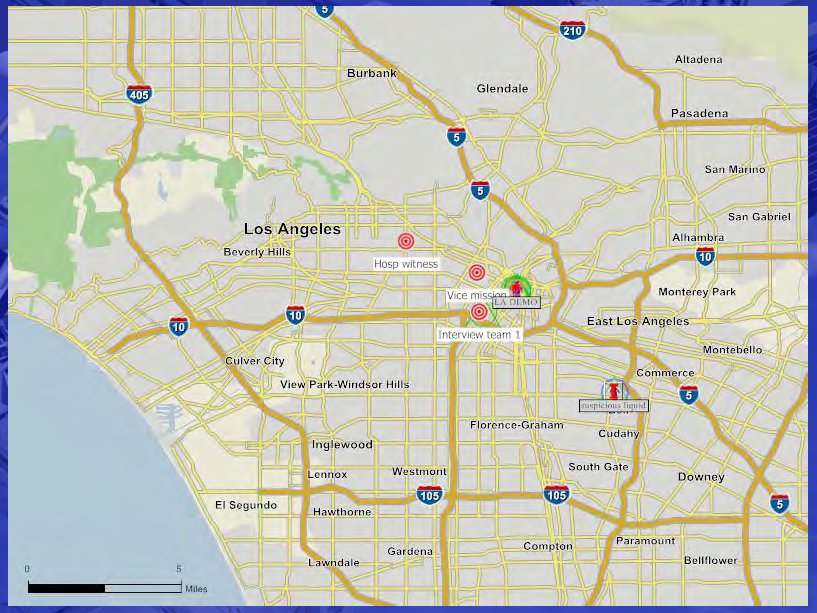
- Cant even program TV remotes, use phones
- Too much training
- Too much reading
- Computers are best for sorting the information.
- Personnel transfer and move often. Training issues of new personnel.
- Can’t depend on IT personnel for rapid response.
- Internet is useful for those not on your system.

Think Limitations

- Internet has many downfalls. If you can’t get to it, you have nothing. I don’t like to depend on it.
- Bandwidth will be the largest limiting factor. Standard videos will not be able to use the low bandwidths.
- Satellites will have a heavy load during disasters. The press will bring money to buy time so don’t depend on adding last minute. There are no guarantees.
- Automation is very important in the field.

Standards and Non-standards

- Protocols
- Software Languages
- Video
- Mapping
- Symbols
- Typing - new OES, FEMA



Working Together

- What type of agencies will be there - Police, Fire, Federal…
- We need access to information, who has the internet? Who has satellite? What are the priorities of the incident? What should be shared?
- How are we communicating? Radio, email, messaging, how do we capture this?

Final Thoughts

- Every agency will have its own unique hurdles. It's based on your individuals, the management and the direction of the leadership
- Design for the missions
- Apply technologies that have sharing capability. We have a common goal!

Homeland Security Institute

OVERVIEW

Outline

- Charter
- What Makes Us Different
- Our People
- Our Value Added Capabilities
- Outside Partners
- Going Forward

Charter

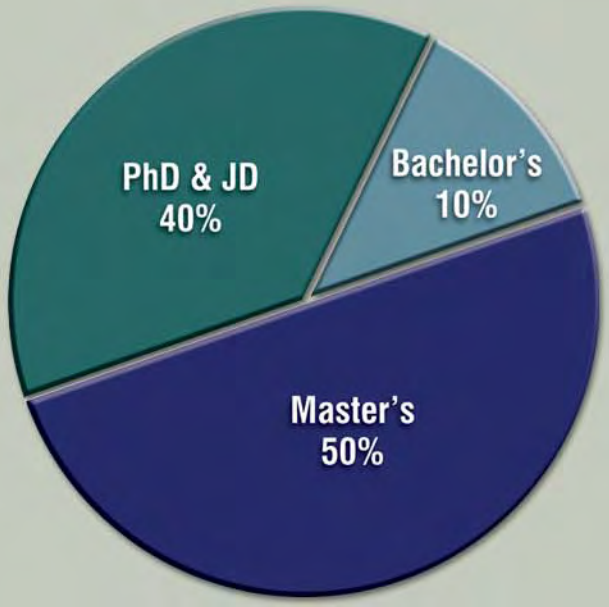
The Homeland Security Institute (HSI) is a Congressionally chartered Federally Funded Research and Development Center (FFRDC).[1] We are dedicated solely to supporting the Department of Homeland Security (DHS) and the homeland security mission.

[1] Homeland Security Act of 2002, Sec. 312, 6 USC. 192 (2002). Sec. 312 (g) was amended by Homeland Security Appropriation Act of 2005, Title V, General Provisions, SEC. 520.

What Makes Us Different

- Not-for-Profit - Dedicated Exclusively to Homeland Security
- Objective, Independent, and Trusted Agent
- Long-term Strategic Partner
- Rigorous Research to address the most complex problems
- Practical and Useful Results
- Actionable Recommendations

Our People



Staff Degrees

- Maintain a pool of seasoned analysts focused solely on homeland security
- Full range of academic disciplines
- Professional experience includes: for profit business, planning and programming, emergency management, technology assessments, intelligence, law enforcement, military operations, the Coast Guard, and public health

Our Value Added Capabilities

- Risk Analysis
- Operations Analysis
- Threat Analysis
- Systems Analysis
- Information Sharing Analysis
- Policy and Planning Analysis
- Program Analysis
- Science and Technology Assessments
- Training, Education, and Professional Development

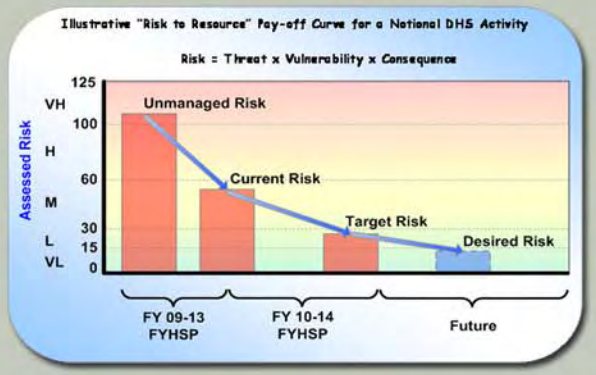
Risk Analysis

Our Expertise:

- Security Studies
- Decision Sciences / Mathematics
- Economics
- Strategic Planning and Mission Analysis
- Program Assessment
- Public Administration
- Organizational Behavior Modeling and Analysis
- Behavioral Sciences

Project: Risk Assessment Process for Informed Decision Making FY 2010-2014

Client: All DHS Components



Project: General Aviation Risk Assessment

Client: TSA

Homeland Security Institute

Operations Analysis

Project: Customs and Border Protection Operational Assessment

Client: Customs and Border Protection (CBP)

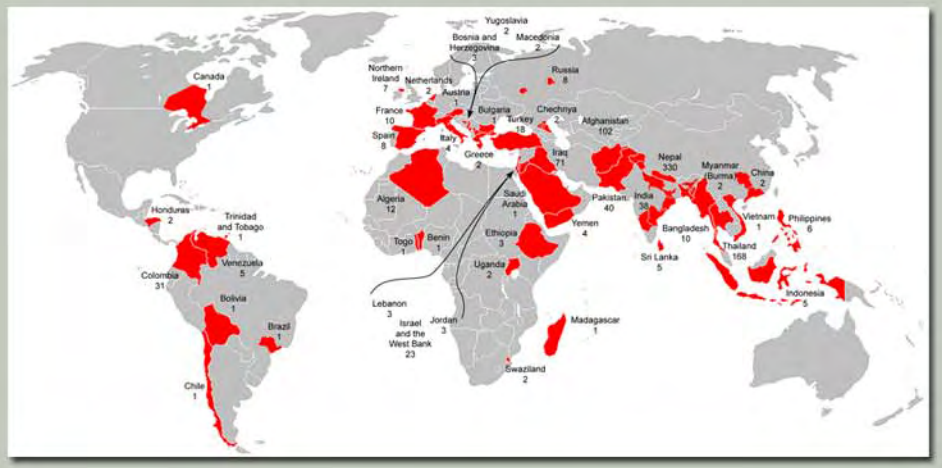
Our Expertise:

- Operations Analysis / Operations Research
- Modeling and Simulation
- Systems Engineering
- Management Sciences
- Relevant Operational Experience (e.g., with CBP, FEMA, USCG, USSS, ICE, FAA, DEA, DoD…)

Threat Analysis

Our Expertise:

- Organizational Behavior Modeling and Analysis
- Behavioral Sciences
- Intelligence
- Criminal Justice
- Security Studies
- Decision Sciences
- Program Evaluation
- Terrorism / Counterterrorism



Project: International Terrorist Incidents Involving Education Targets

Client: Dept. of Education

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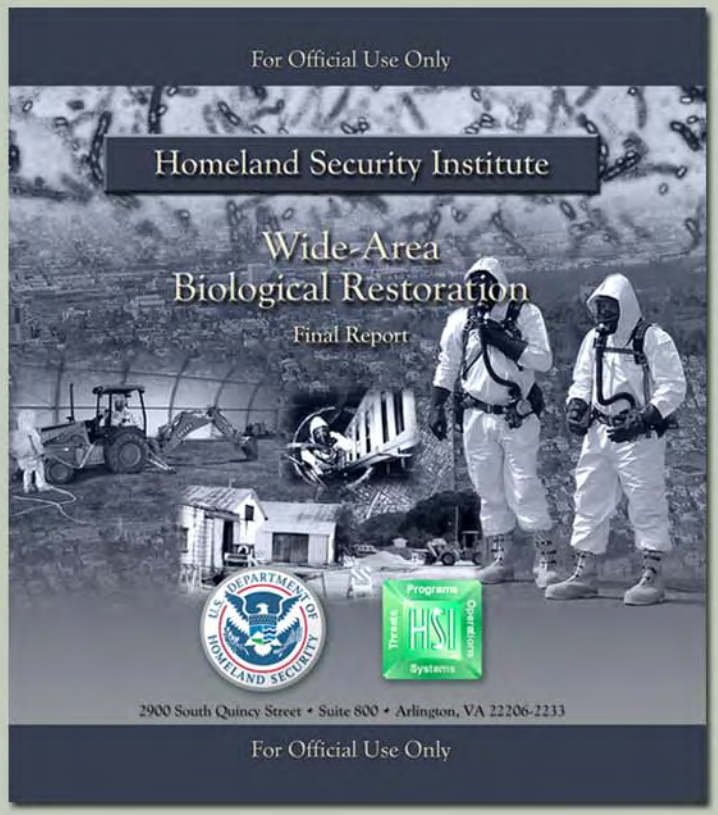
Systems Analysis



Project: Wide-Area Biological Restoration Report

Client: DHS S&T

Homeland Security Institute

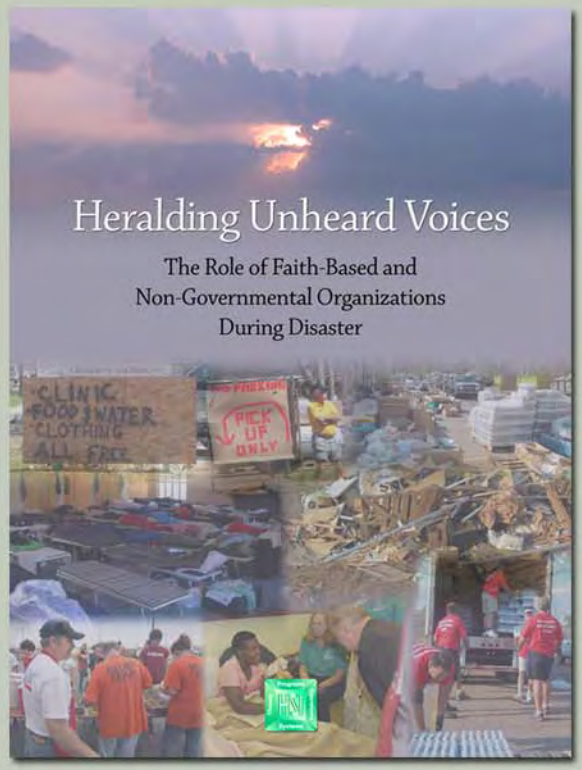
Our Expertise:

- Systems Engineering
- Modeling and Simulation
- Mathematics/Operations Research
- Management Sciences
- Cost Analysis
- Acquisition
- Logistics
- Requirements Development and Management

Information Sharing Analysis

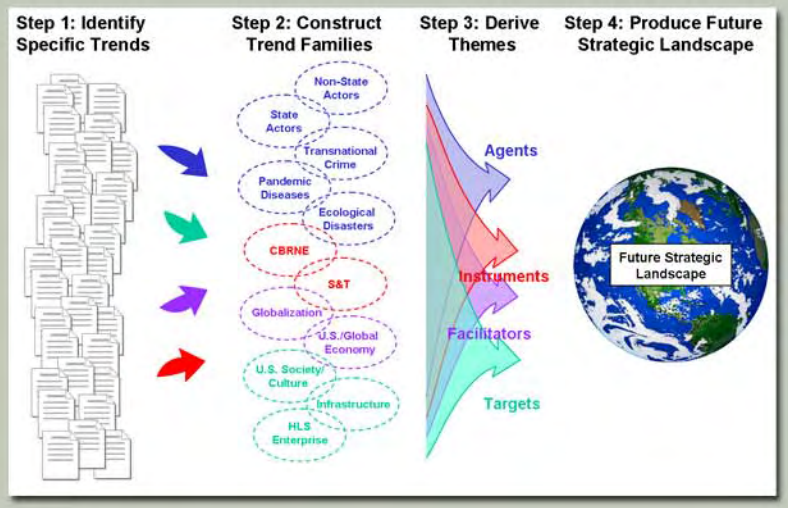
Our Expertise:

- Intelligence
- Criminal Justice
- Terrorism/ Counterterrorism
- Information Sharing Strategy Development and Management
- Relevant Operational Experience (e.g., with CIA, ICE, CBP, USCG, USSS, DoD…)



Project: Heralding Unheard Voices: The Role of Faith-Based Organizations and Non-Governmental Organizations During Disasters
Client: DHS S&T / Private Sector

Policy and Planning Analysis



Project: Future Strategic Landscape: Homeland Security Planning Environment 2012-2015

Client: All DHS Components

Our Expertise:

- Public Policy
- Public Administration
- Planning
- Organizational Theory, Development, Management, and Governance
- Management Sciences
- Financial Planning and Management
- Logistics Planning

Program Analysis

Our Expertise:

- Public Administration
- Management Sciences
- Financial Management
- Economics
- Acquisition / Program Management Certification
- Logistics Planning
- Business Administration

Project: Independent Cost Assessment of the Nationwide Automatic Identification System

Client: USCG

Science and Technology Assessments

Project: DHS Chemical Countermeasures Program Planning Area—Strategic Review

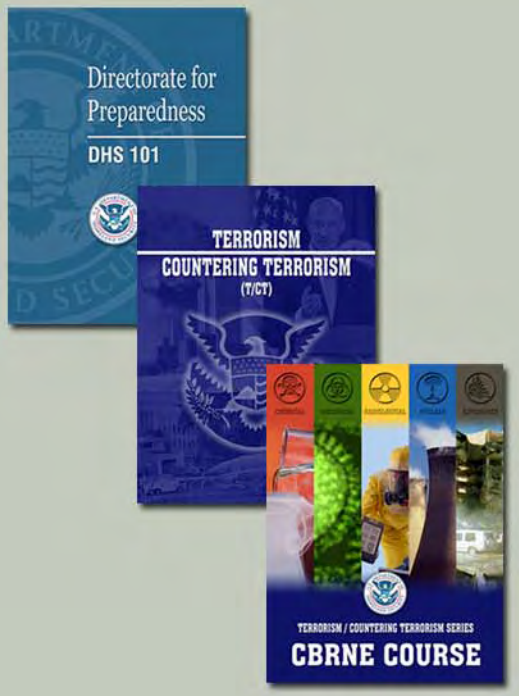
Project: Biodefense Net Assessment

Client: Interagency Review Panels / DHS S&T

Our Expertise:

- Science and Technology Program Management
- Chemical and Biological Defense
- Microbiology
- Molecular Biology, Biochemistry, and Genetics
- Chemistry
- Physics
- Environmental Engineering
- Detector Development

Training, Education, and Professional Development



Our Expertise:

- Education and Training
- Exercises and Simulations
- Curriculum Development
- Doctrine Development
- TEPD Program Assessment
- Subject Matter Expertise in Homeland Security Fields

Project: Training Management and Professional Development Study

Client: DHS Preparedness

Homeland Security Institute

Partners

- Lots of Progress
- Internal Stakeholders:
  - DHS – now supporting 18 components / staff functions
  - Other Federal Agencies – DoEd, DoD, ODNI
- External Support (to the work):
  - Outside SMEs
  - Corporate Reachback
  - Other FFRDCs
  - COEs

Going Forward

Uniquely positioned to:

- Help address the most difficult issues
- Help the nation invest limited resources wisely
- Help transition DHS to a new Administration

Conclusion

- The Homeland Security Institute is a good news story
  - Positioned as an integrator with potential to help foster collaboration and cohesion among the disparate elements of government and beyond.
  - Demonstrated potential to make an ever-increasing, enduring contribution in the Homeland Security mission space.
  - Represents the development of a National asset that will continue to expand its influence going forward.